


STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS AND MINING						FORM 3 AMENDED REPORT <input type="checkbox"/>				
APPLICATION FOR PERMIT TO DRILL						1. WELL NAME and NUMBER Morgan State 921-36E1CS				
2. TYPE OF WORK DRILL NEW WELL <input checked="" type="checkbox"/> REENTER P&A WELL <input type="checkbox"/> DEEPEN WELL <input type="checkbox"/>						3. FIELD OR WILDCAT NATURAL BUTTES				
4. TYPE OF WELL Gas Well <input type="checkbox"/> Coalbed Methane Well: NO <input type="checkbox"/>						5. UNIT or COMMUNITIZATION AGREEMENT NAME				
6. NAME OF OPERATOR KERR-MCGEE OIL & GAS ONSHORE, L.P.						7. OPERATOR PHONE 720 929-6515				
8. ADDRESS OF OPERATOR P.O. Box 173779, Denver, CO, 80217						9. OPERATOR E-MAIL julie.jacobson@anadarko.com				
10. MINERAL LEASE NUMBER (FEDERAL, INDIAN, OR STATE) ML 22265			11. MINERAL OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>			12. SURFACE OWNERSHIP FEDERAL <input type="checkbox"/> INDIAN <input type="checkbox"/> STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>				
13. NAME OF SURFACE OWNER (if box 12 = 'fee')						14. SURFACE OWNER PHONE (if box 12 = 'fee')				
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')						16. SURFACE OWNER E-MAIL (if box 12 = 'fee')				
17. INDIAN ALLOTTEE OR TRIBE NAME (if box 12 = 'INDIAN')			18. INTEND TO COMMINGLE PRODUCTION FROM MULTIPLE FORMATIONS YES <input checked="" type="checkbox"/> (Submit Commingling Application) NO <input type="checkbox"/>			19. SLANT VERTICAL <input type="checkbox"/> DIRECTIONAL <input checked="" type="checkbox"/> HORIZONTAL <input type="checkbox"/>				
20. LOCATION OF WELL		FOOTAGES		QTR-QTR	SECTION	TOWNSHIP	RANGE	MERIDIAN		
LOCATION AT SURFACE		1538 FNL 791 FWL		SWNW	36	9.0 S	21.0 E	S		
Top of Uppermost Producing Zone		1944 FNL 821 FWL		SWNW	36	9.0 S	21.0 E	S		
At Total Depth		1944 FNL 821 FWL		SWNW	36	9.0 S	21.0 E	S		
21. COUNTY UINTAH			22. DISTANCE TO NEAREST LEASE LINE (Feet) 821			23. NUMBER OF ACRES IN DRILLING UNIT 639				
			25. DISTANCE TO NEAREST WELL IN SAME POOL (Applied For Drilling or Completed) 189			26. PROPOSED DEPTH MD: 10622 TVD: 10592				
27. ELEVATION - GROUND LEVEL 5010			28. BOND NUMBER 22013542			29. SOURCE OF DRILLING WATER / WATER RIGHTS APPROVAL NUMBER IF APPLICABLE 43-8496				
Hole, Casing, and Cement Information										
String	Hole Size	Casing Size	Length	Weight	Grade & Thread	Max Mud Wt.	Cement	Sacks	Yield	Weight
Surf	12.25	8.625	0 - 2610	28.0	J-55 LT&C	0.2	Type V	180	1.15	15.8
							Class G	270	1.15	15.8
Prod	7.875	4.5	0 - 10622	11.6	HCP-110 LT&C	13.0	Premium Lite High Strength	320	3.38	12.0
							50/50 Poz	1530	1.31	14.3
ATTACHMENTS										
VERIFY THE FOLLOWING ARE ATTACHED IN ACCORDANCE WITH THE UTAH OIL AND GAS CONSERVATION GENERAL RULES										
<input checked="" type="checkbox"/> WELL PLAT OR MAP PREPARED BY LICENSED SURVEYOR OR ENGINEER					<input checked="" type="checkbox"/> COMPLETE DRILLING PLAN					
<input type="checkbox"/> AFFIDAVIT OF STATUS OF SURFACE OWNER AGREEMENT (IF FEE SURFACE)					<input type="checkbox"/> FORM 5. IF OPERATOR IS OTHER THAN THE LEASE OWNER					
<input checked="" type="checkbox"/> DIRECTIONAL SURVEY PLAN (IF DIRECTIONALLY OR HORIZONTALLY DRILLED)					<input checked="" type="checkbox"/> TOPOGRAPHICAL MAP					
NAME Danielle Piernot				TITLE Regulatory Analyst			PHONE 720 929-6156			
SIGNATURE				DATE 12/19/2011			EMAIL danielle.piernot@anadarko.com			
API NUMBER ASSIGNED 43047522780000				APPROVAL  Permit Manager						

Kerr-McGee Oil & Gas Onshore. L.P.**MORGAN STATE 921-36E1CS**

Surface: 1538 FNL / 791 FWL SWNW
 BHL: 1944 FNL / 821 FWL SWNW

Section 36 T9S R21E

Unitah County, Utah
 Mineral Lease: ML-22265

ONSHORE ORDER NO. 1**DRILLING PROGRAM**

1. & 2.a **Estimated Tops of Important Geologic Markers:**
Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,379'	
Birds Nest	1,665'	Water
Mahogany	2,163'	Water
Wasatch	4,623'	Gas
Mesaverde	7,324'	Gas
Sego	9,518'	Gas
Castlegate	9,566'	Gas
MN5	9,992'	Gas
TVD =	10,592'	
TD =	10,622'	

- 2.C Kerr McGee Oil & Gas Onshore LP (Kerr McGee) will either drill to the the Blackhawk formation, which is part of the Mesaverde formation, or the Wasatch/Mesaverde formation. If Kerr McGee drills to the Blackhawk formation (part of the Mesaverde formation), please refer to MN5 as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr McGee drills to the Wasatch/Mesaverde formation please refer to Sego as the bottom formation. The attached Wasatch/Mesaverde Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the depths the Wasatch/Mesaverde formations are found.

3. **Pressure Control Equipment** (Schematic Attached)

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

4. Proposed Casing & Cementing Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

5. Drilling Fluids Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

6. Evaluation Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

7. Abnormal Conditions:**7.a Blackhawk (Part of Mesaverde Formation) Target Formation**

Maximum anticipated bottom hole pressure calculated at 10592' TVD, approximately equals
6,991 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,709 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

7.b Wasach/Mesaverde Target Formation

Maximum anticipated bottom hole pressure calculated at 9518' TVD, approximately equals
6,092 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,984 psi (bottom hole pressure
minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-
(0.22 psi/ft-partial evac gradient x TVD of next csg point))

8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

9. Variances:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program
Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements
associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated
with air drilling.

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

Background

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11 inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

10. Other Information:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program



KERR-McGEE OIL & GAS ONSHORE LP
BLACKHAWK DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	December 19, 2011		
WELL NAME	MORGAN STATE 921-36E1CS					TD	10,592'	TVD	10,622' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		5,007'
SURFACE LOCATION	SWNW	1538 FNL	791 FWL	Sec 36	T 9S	R 21E			
	Latitude:	39.995557	Longitude:	-109.505969					NAD 27
BTM HOLE LOCATION	SWNW	1944 FNL	821 FWL	Sec 36	T 9S	R 21E			
	Latitude:	39.994442	Longitude:	-109.50586					NAD 27
OBJECTIVE ZONE(S)	BLACKHAWK								
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.								

GEOLOGICAL			MECHANICAL		
LOGS	FORMATION TOPS	DEPTH	HOLE SIZE	CASING SIZE	MUD WEIGHT
		40'		14"	
			↑ 12-1/4 ↓	↑ 8-5/8", 28#, IJ-55, LTC ↓	↑ Air mist ↓
		200'			
All water flows encountered while drilling will be reported to the appropriate agencies.			↑ 11.00' ↓	↑ 8-5/8", 28#, IJ-55, LTC ↓	↑ Air mist ↓
Green River @		1,379'			
Top of Birds Nest @		1,665'			
Mahogany @		2,163'			
Preset f/ GL @		2,610' TVD			
Note: 11" surface hole will usually be drilled ±400' below the lost circulation zone (aka bird's nest). Drilled depth may be ±200' of the estimated set depth depending on the actual depth of the loss zone.					
Wasatch @		4,623'			
Mud logging program TBD Cased hole logging program from TD - surf csg			7-7/8"	4-1/2" 11.6# HCP-110 Ultra DQX/LTC csg	Water / Fresh Water Mud 8.3-13.0 ppg
Mesaverde @		7,324' TVD			
Sego @		9,518' TVD			
Castlegate @		9,566' TVD			
MN5 @		9,992' TVD			
Max anticipated Mud required 13.0 ppg		10,592' TVD			
	TD @	10,622' MD			



KERR-McGEE OIL & GAS ONSHORE LP

BLACKHAWK DRILLING PROGRAM

CASING PROGRAM

	SIZE	INTERVAL	WT.	GR.	CPLG.	DESIGN FACTORS			
						BURST	COLLAPSE	LTC	DQX
								TENSION	
CONDUCTOR	14"	0-40'				3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0 to 2,610	28.00	IJ-55	LTC	2.06	1.54	5.44	N/A
						10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0 to 5,000	11.60	HCP-110	DQX	1.19	1.21		3.72
	4-1/2"	5,000 to 10,622'	11.60	HCP-110	LTC	1.19	1.21	5.34	

Surface Casing:

(Burst Assumptions: TD = 13.0 ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @

9000 psi)

0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoys.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT	YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80	1.15
			+ 0.25 pps flocele				
Option 1	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80	1.15
			+ 2% CaCl + 0.25 pps flocele				
SURFACE			NOTE: If well will circulate water to surface, option 2 will be utilized				
Option 2	LEAD	2,110'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00	3.82
			+ 0.25 pps Flocele + 3% salt BWOW				
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80	1.15
			+ 0.25 pps flocele				
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80	1.15
PRODUCTION	LEAD	4,122'	Premium Lite II +0.25 pps	320	35%	12.00	3.38
			celloflake + 5 pps gilsonite + 10% gel				
			+ 0.5% extender				
	TAIL	6,500'	50/50 Poz/G + 10% salt + 2% gel	1,530	35%	14.30	1.31
			+ 0.1% R-3				

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

DRILLING ENGINEER:

Nick Spence / Danny Showers / Chad Loesel

DATE:

DRILLING SUPERINTENDENT:

Kenny Gathings / Lovel Young

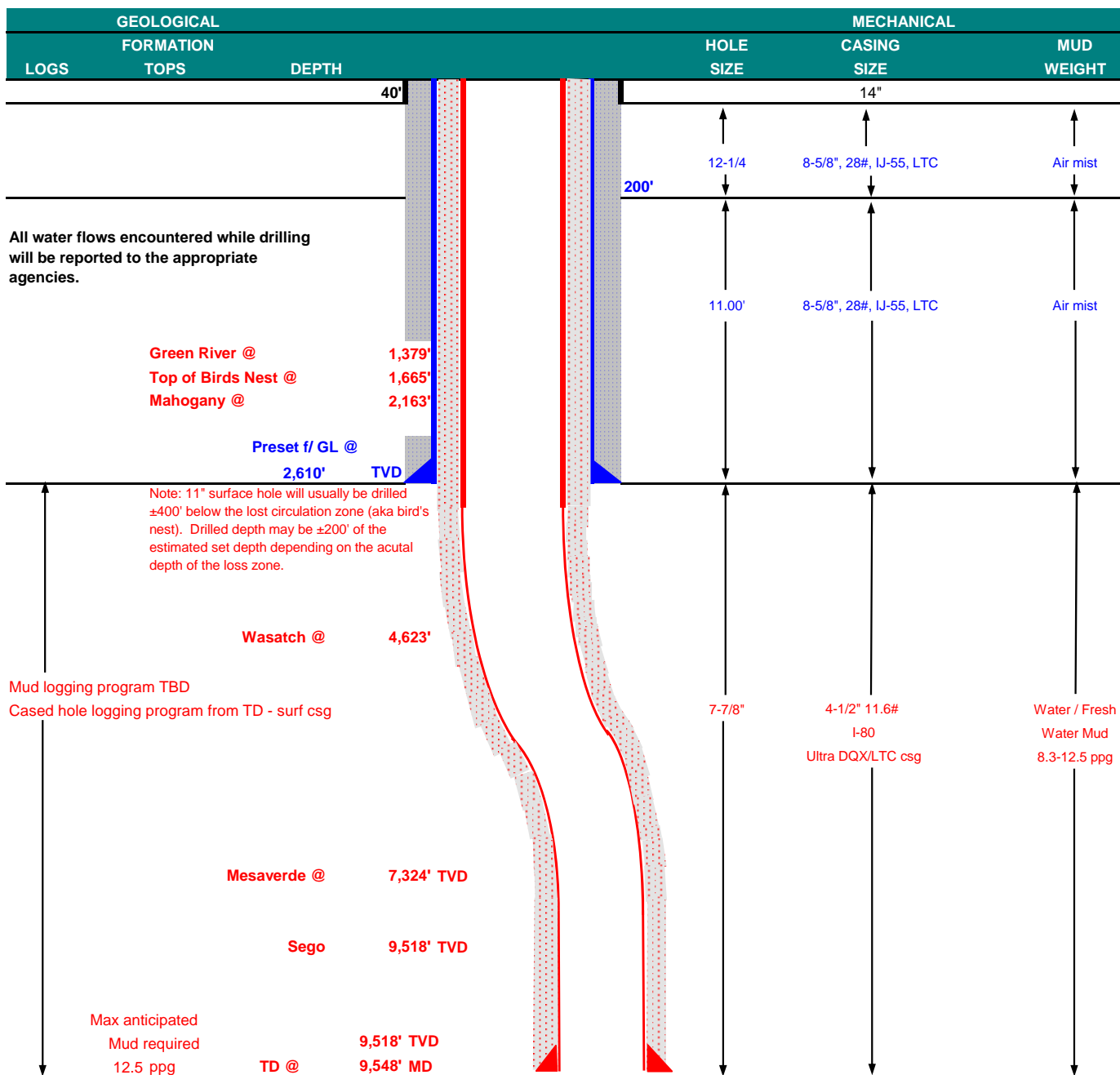
DATE:

RECEIVED: December 19, 2011



KERR-McGEE OIL & GAS ONSHORE LP WASATCH/MESAVERDE DRILLING PROGRAM

COMPANY NAME	KERR-McGEE OIL & GAS ONSHORE LP					DATE	December 19, 2011		
WELL NAME	MORGAN STATE 921-36E1CS					TD	9,518'	TVD	9,548' MD
FIELD	Natural Buttes		COUNTY	Uintah	STATE	Utah	FINISHED ELEVATION		5,007'
SURFACE LOCATION	SWNW	1538 FNL	791 FWL	Sec 36	T 9S	R 21E			
	Latitude: 39.995557		Longitude: -109.505969		NAD 27				
BTM HOLE LOCATION	SWNW	1944 FNL	821 FWL	Sec 36	T 9S	R 21E			
	Latitude: 39.994442		Longitude: -109.50586		NAD 27				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde								
ADDITIONAL INFO	Regulatory Agencies: UDOGM (Minerals), UDOGM (Surface), UDOGM Tri-County Health Dept.								



**KERR-McGEE OIL & GAS ONSHORE LP****WASATCH/MESAVERDE DRILLING PROGRAM****CASING PROGRAM**

						DESIGN FACTORS			
						LTC		DQX	
	SIZE	INTERVAL		WT.	GR.	CPLG.	BURST	COLLAPSE	TENSION
CONDUCTOR	14"	0-40'							
							3,390	1,880	348,000
SURFACE	8-5/8"	0	to 2,610	28.00	IJ-55	LTC	2.06	1.54	5.44
							7,780	6,350	267,035
PRODUCTION	4-1/2"	0	to 5,000	11.60	I-80	DQX	1.11	1.03	2.98
							7,780	6,350	223,000
	4-1/2"	5,000	to 9,548'	11.60	I-80	LTC	1.11	1.03	5.22

Surface Casing:

(Burst Assumptions: TD = 12.5 ppg)

0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @

7000 psi)

0.64 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW)

(Tension Assumptions: Air Weight of Casing*Buoy.Fact. of water)

CEMENT PROGRAM

		FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD
SURFACE	LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15
			+ 2% CaCl + 0.25 pps flocele					
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized						
Option 2	LEAD	2,110'	65/35 Poz + 6% Gel + 10 pps gilsonite	190	35%	11.00		3.82
			+ 0.25 pps Flocele + 3% salt BWOW					
	TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15
			+ 0.25 pps flocele					
	TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15
PRODUCTION	LEAD	4,118'	Premium Lite II +0.25 pps	320	35%	12.00		3.38
			celloflake + 5 pps gilsonite + 10% gel					
			+ 0.5% extender					
	TAIL	5,430'	50/50 Poz/G + 10% salt + 2% gel	1,280	35%	14.30		1.31
			+ 0.1% R-3					

*Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

*Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

FLOAT EQUIPMENT & CENTRALIZERS

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
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ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum intervals.

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

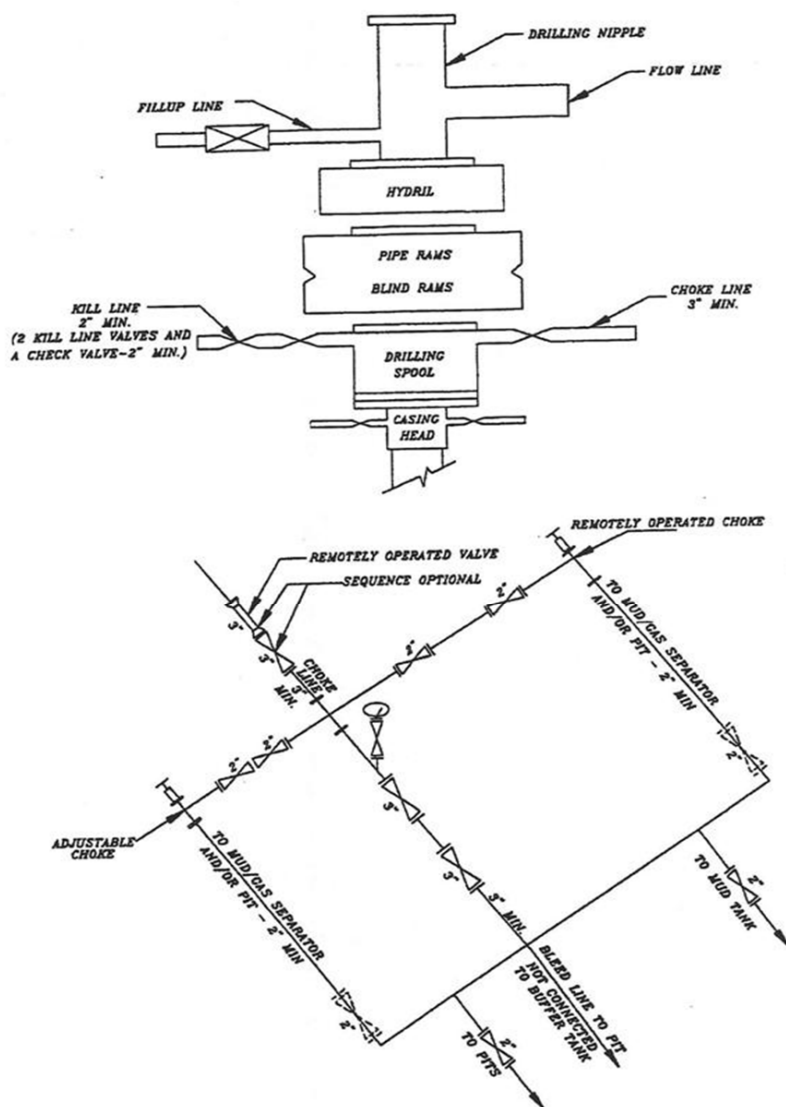
DRILLING ENGINEER:

Nick Spence / Danny Showers / Chad Loesel

DATE:**DRILLING SUPERINTENDENT:**

Kenny Gathings / Lovel Young

DATE:**RECEIVED:** December 19, 2011

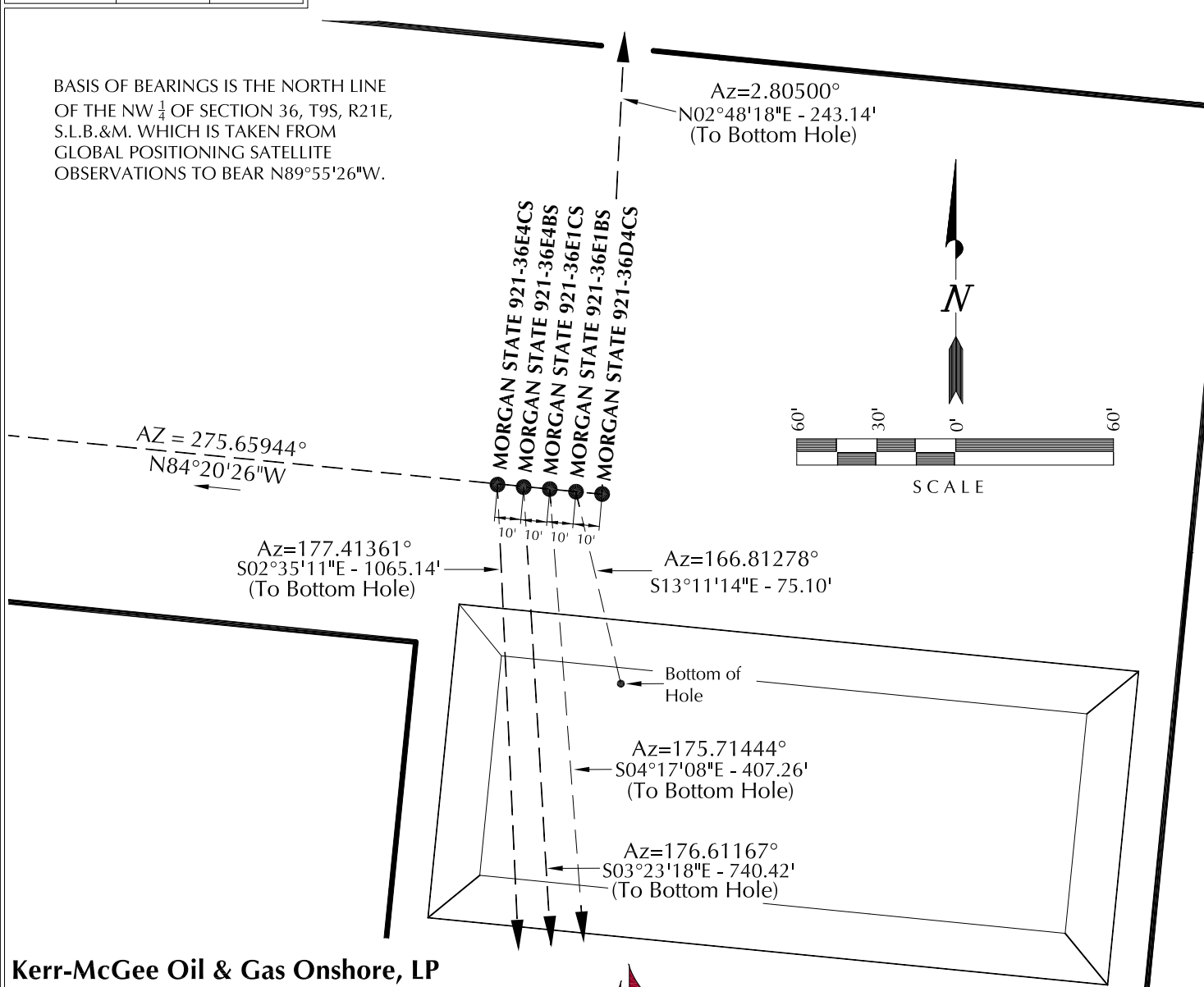
EXHIBIT A
MORGAN STATE 921-36E1CS**SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK**



WELL NAME	SURFACE POSITION					BOTTOM HOLE				
	NAD83		NAD27		FOOTAGES	NAD83		NAD27		FOOTAGES
	LATITUDE	LONGITUDE	LATITUDE	LONGITUDE		LATITUDE	LONGITUDE	LATITUDE	LONGITUDE	
MORGAN STATE 921-36D4CS	39°59'43.859"	109°30'23.706"	39°59'43.985"	109°30'21.234"	1540' FNL	39°59'46.259"	109°30'23.555"	39°59'46.385"	109°30'21.083"	1297' FNL
	39.995516°	109.506585°	39.995551°	109.505898°	811' FWL	39.996183°	109.506543°	39.996218°	109.505856°	823' FWL
MORGAN STATE 921-36E1BS	39°59'43.869"	109°30'23.834"	39°59'43.995"	109°30'21.362"	1539' FNL	39°59'43.146"	109°30'23.613"	39°59'43.273"	109°30'21.141"	1612' FNL
	39.995519°	109.506620°	39.995554°	109.505934°	801' FWL	39.995318°	109.506559°	39.995353°	109.505873°	818' FWL
MORGAN STATE 921-36E1CS	39°59'43.879"	109°30'23.961"	39°59'44.005"	109°30'21.489"	1538' FNL	39°59'39.866"	109°30'23.568"	39°59'39.992"	109°30'21.096"	1944' FNL
	39.995522°	109.506656°	39.995557°	109.505969°	791' FWL	39.994407°	109.506547°	39.994442°	109.505860°	821' FWL
MORGAN STATE 921-36E4BS	39°59'43.888"	109°30'24.089"	39°59'44.015"	109°30'21.617"	1537' FNL	39°59'36.586"	109°30'23.523"	39°59'36.712"	109°30'21.051"	2276' FNL
	39.995525°	109.506691°	39.995560°	109.506005°	781' FWL	39.993496°	109.506534°	39.993531°	109.505847°	824' FWL
MORGAN STATE 921-36E4CS	39°59'43.898"	109°30'24.217"	39°59'44.024"	109°30'21.745"	1536' FNL	39°59'33.385"	109°30'23.593"	39°59'33.511"	109°30'21.121"	2600' FNL
	39.995527°	109.506727°	39.995562°	109.506040°	771' FWL	39.992607°	109.506554°	39.992642°	109.505867°	818' FWL

RELATIVE COORDINATES - From Surface Position to Bottom Hole

WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST	WELL NAME	NORTH	EAST
MORGAN STATE 921-36D4CS	242.8'	11.9'	MORGAN STATE 921-36E1BS	-73.1'	17.1'	MORGAN STATE 921-36E1CS	-406.1'	30.4'	MORGAN STATE 921-36E4BS	-739.1'	43.8'
WELL NAME	NORTH	EAST									
MORGAN STATE 921-36E4CS	-1064.1'	48.1'									



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WELL PAD - MORGAN STATE 921-36E

WELL PAD INTERFERENCE PLAT
WELLS - MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS, MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS & MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UTAH COUNTY, UTAH.



CONSULTING, LLC
2155 North Main Street
Sheridan WY 82801
Phone 307-674-0609
Fax 307-674-0182

TIMBERLINE

(435) 789-1365

ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE SURVEYED: 10-11-11	SURVEYED BY: J.W.	SHEET NO: 6 6 OF 17
DATE DRAWN: 10-31-11	DRAWN BY: T.J.R.	
SCALE: 1" = 60'	Date Last Revised:	



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209 NORTH 300 WEST - VERNAL, UTAH 84078

WELL PAD LEGEND

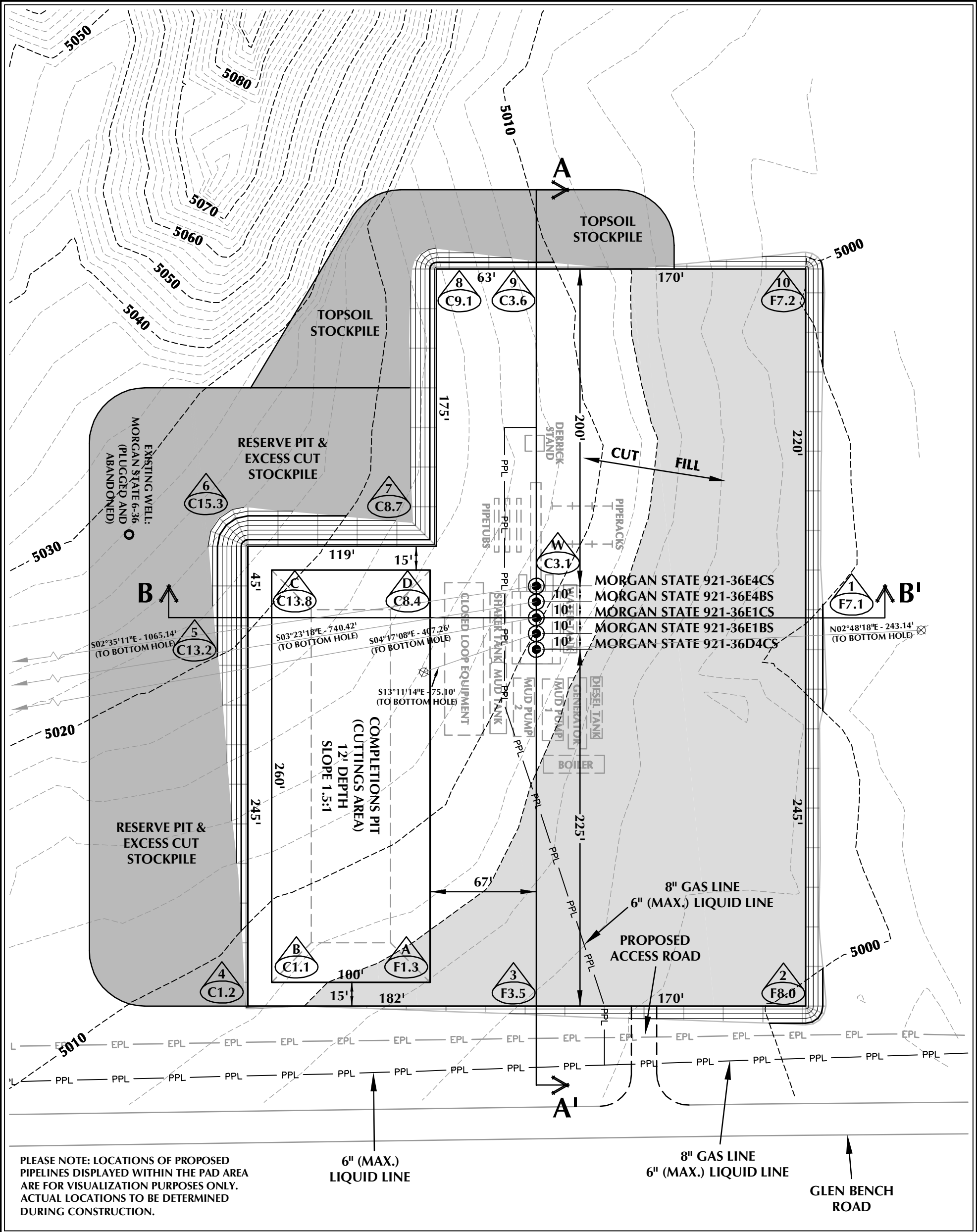
-

2' CONTOURS

7

7

7 OF 17



PLEASE NOTE: LOCATIONS OF PROPOSED PIPELINES DISPLAYED WITHIN THE PAD AREA ARE FOR VISUALIZATION PURPOSES ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

6" (MAX.) LIQUID LINE

8" GAS LINE
6" (MAX.) LIQUID LINE

GLEN BENCH ROAD

WELL PAD - MORGAN STATE 921-36E (CLOSED LOOP) DESIGN SUMMARY

EXISTING GRADE @ CENTER OF WELL PAD = 5010.3'
FINISHED GRADE ELEVATION = 5007.2'
CUT SLOPES = 1.5:1
FILL SLOPES = 1.5:1
TOTAL WELL PAD AREA = 3.68 ACRES
TOTAL DISTURBANCE AREA = 5.00 ACRES
SHRINKAGE FACTOR = 1.10
SWELL FACTOR = 1.00

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WELL PAD - MORGAN STATE 921-36E

WELL PAD - LOCATION LAYOUT
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UTAH COUNTY, UTAH



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WELL PAD QUANTITIES

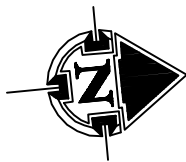
TOTAL CUT FOR WELL PAD = 14,142 C.Y.
TOTAL FILL FOR WELL PAD = 12,442 C.Y.
TOPSOIL @ 6" DEPTH = 2,811 C.Y.
EXCESS MATERIAL = 1,700 C.Y.

COMPLETIONS PIT QUANTITIES

TOTAL CUT FOR COMPLETIONS PIT
+/- 8,870 C.Y.
COMPLETIONS PIT CAPACITY
(2' OF FREEBOARD)
+/- 33,770 BARRELS

WELL PAD LEGEND

- EXISTING WELL LOCATION
- PROPOSED WELL LOCATION
- PROPOSED BOTTOM HOLE LOCATION
- EXISTING CONTOURS (2' INTERVAL)
- PROPOSED CONTOURS (2' INTERVAL)
- PPL - PROPOSED PIPELINE
- EPL - EXISTING PIPELINE



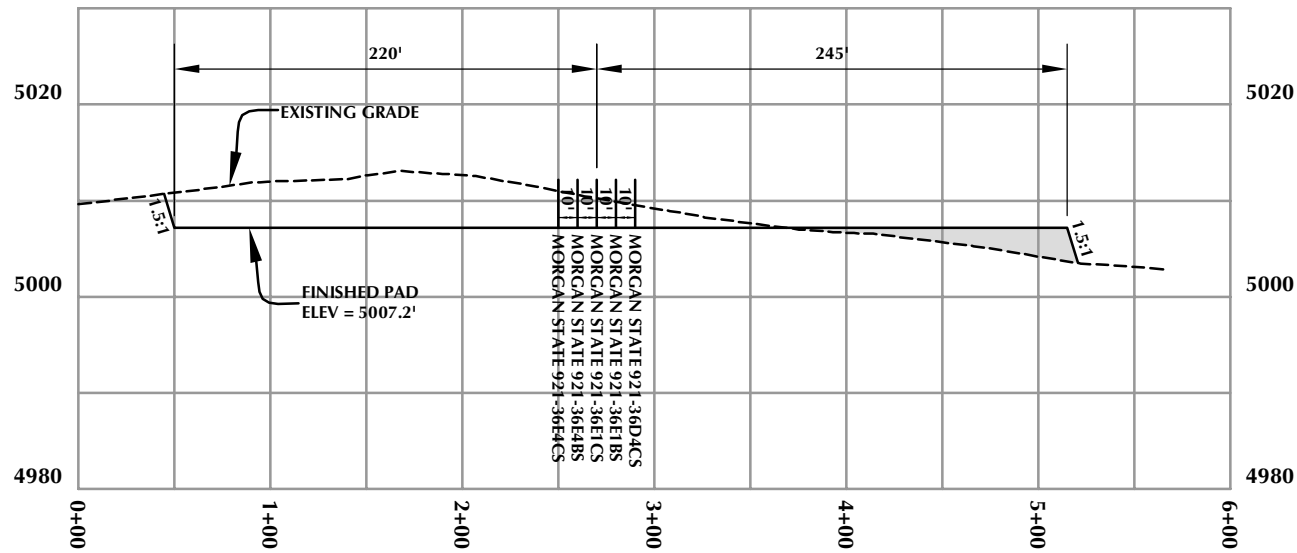
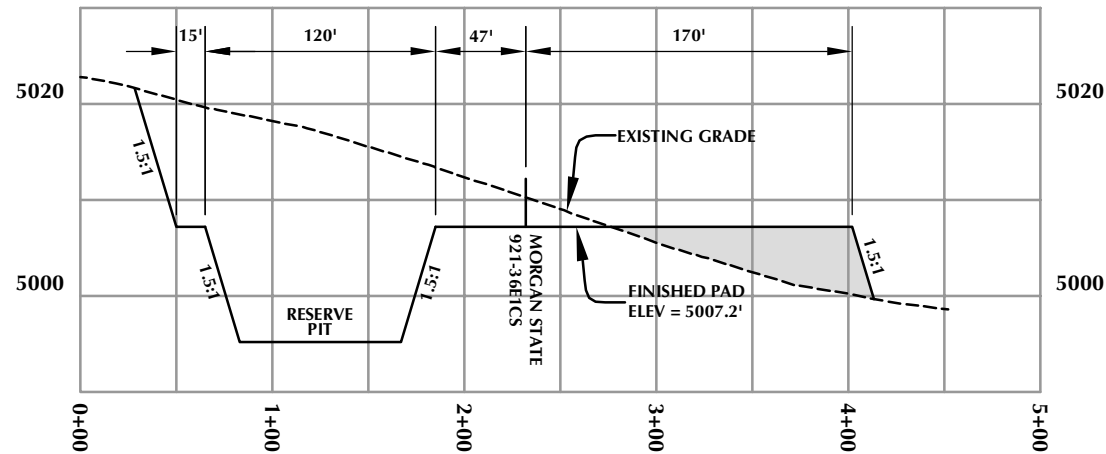
HORIZONTAL 0 30' 60' 1" = 60'
2' CONTOURS

SCALE: 1"=60' DATE: 11/15/11 SHEET NO:

REVISED: 7B 7B OF 17

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**CROSS SECTION A-A'****CROSS SECTION B-B'**

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WELL PAD - MORGAN STATE 921-36E

WELL PAD - CROSS SECTIONS
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UTAH COUNTY, UTAH



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HORIZONTAL 0 50' 100' 1" = 100'
VERTICAL 0 10' 20' 1" = 20'

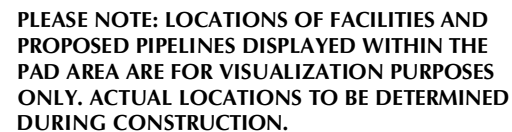
Scale: 1"=100' Date: 11/11/11
REVISED:

SHEET NO:

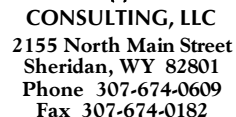
8

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RECEIVED: December 19, 2011



WELL PAD - FACILITIES DIAGRAM
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH



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209 NORTH 300 WEST - VERNAL, UTAH 84078

Scale:	1"=60'
REVISED:	

9 OF 17



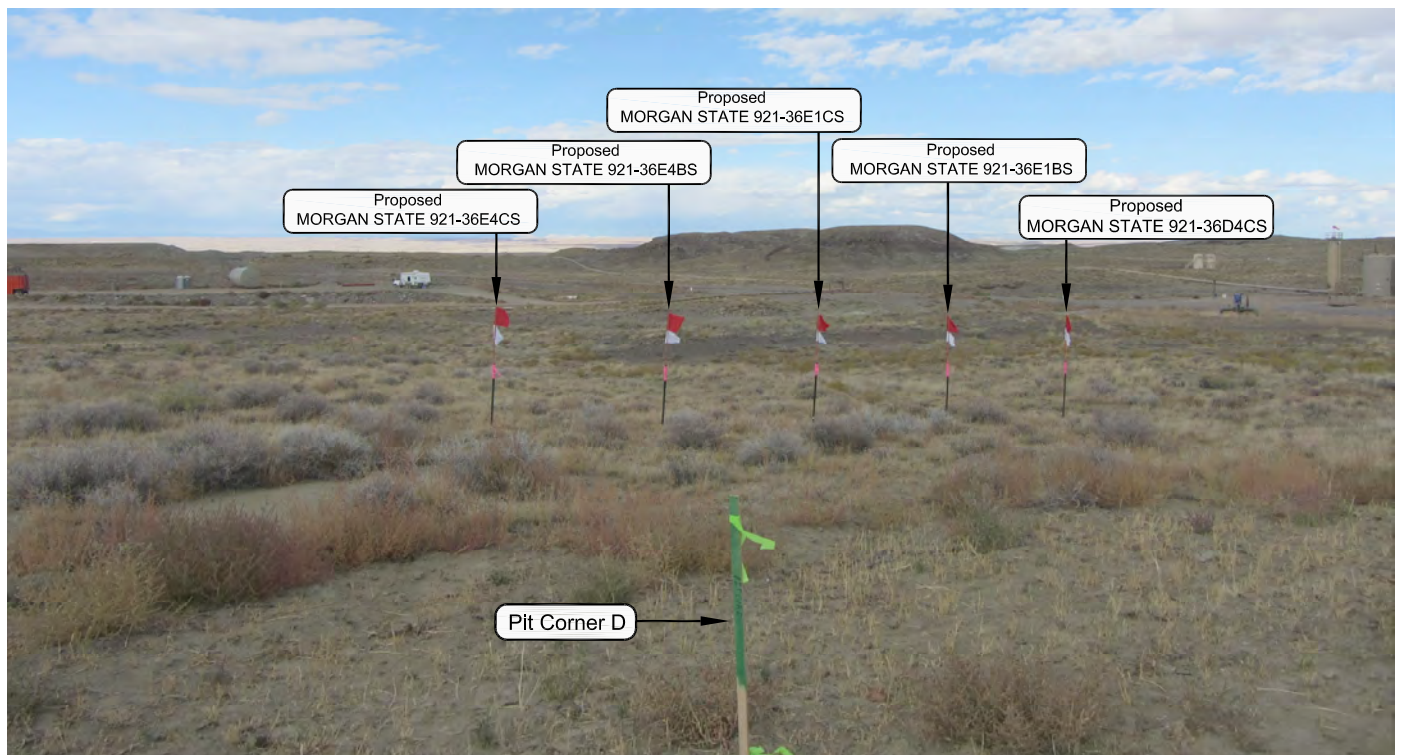


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE

CAMERA ANGLE: NORTHEASTERLY



PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: WESTERLY

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WELL PAD - MORGAN STATE 921-36E

LOCATION PHOTOS
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS, MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS & MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UTAH COUNTY, UTAH.



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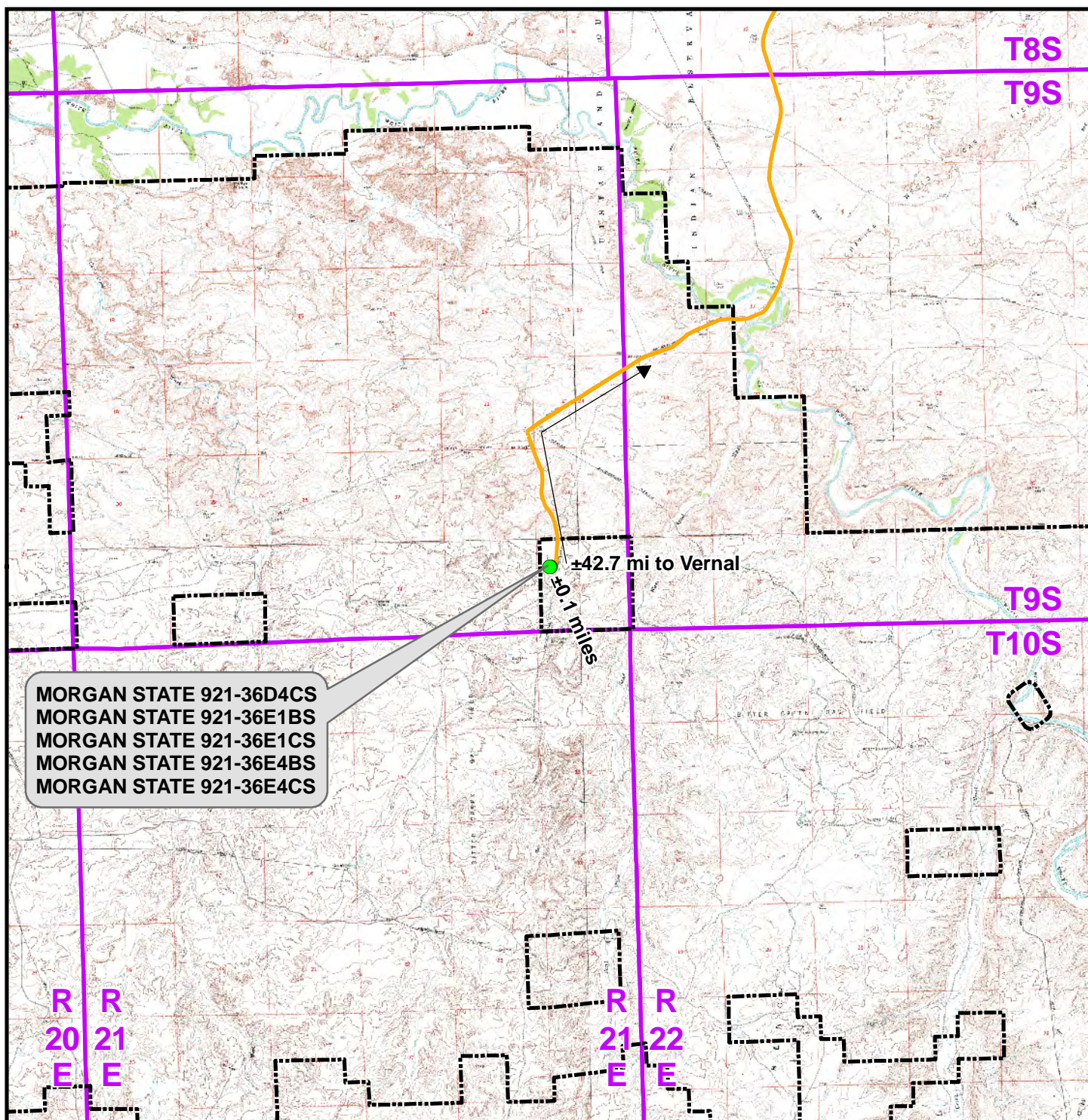
TIMBERLINE

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ENGINEERING & LAND SURVEYING, INC.
209 NORTH 300 WEST - VERNAL, UTAH 84078

DATE PHOTOS TAKEN: 10-11-11	PHOTOS TAKEN BY: J.W.	SHEET NO: 10 10 OF 17
DATE DRAWN: 10-31-11	DRAWN BY: T.J.R.	
Date Last Revised:		

RECEIVED: December 19, 2011

**Legend**

Distance From Well Pad - MORGAN STATE 921-36E To Unit Boundary: ±771ft

- Proposed Well Location □ Natural Buttes Unit Boundary
— Access Route - Proposed

WELL PAD - MORGAN STATE 921-36E

TOPO A
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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Gas Onshore L.P.**

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SCALE: 1:100,000

NAD83 USP Central

SHEET NO:

DRAWN: TL

DATE: 11 Nov 2011

11

REVISED:

DATE:

11 OF 17












 Bureau of Land Management
  State

 Indian Reservation
  Private

12 OF 17

Proposed Well	Nearest Well Bore	Footage
MORGAN STATE 921-36D4CS	Morgan State 2-36	398ft
MORGAN STATE 921-36E1BS	Morgan State 6-36	205ft
MORGAN STATE 921-36E1CS	Morgan State 6-36	189ft
MORGAN STATE 921-36E4BS	Morgan State 6-36	500ft
MORGAN STATE 921-36E4CS	Morgan State 4-36	749ft

 Well - Proposed  Well Path
 Bottom Hole - Proposed  Well Pad
 Bottom Hole - Existing  Well - 1 Mile Radius

 Producing
  Deferred
  Active Injector
  Plugged & Abandoned
 Spudded
 Cancelled
 Location Abandoned
 APD Approved
 Temporarily Abandoned
 Shut-In
 Preliminary Location

TOPO C
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

**1099 18th Street
Denver, Colorado 80202**

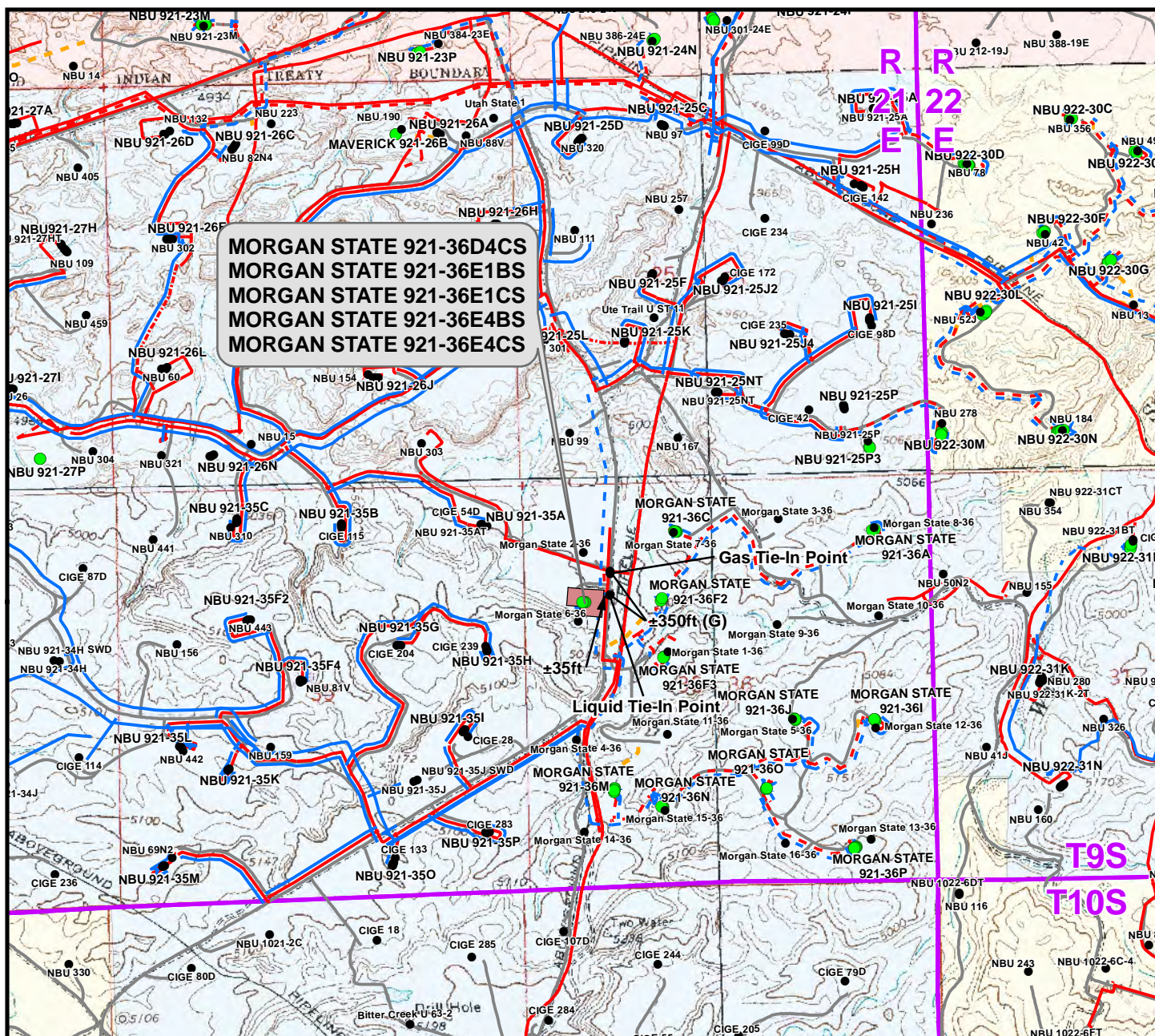


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SHEET NO:

13

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Proposed Liquid Pipeline	Length
=====	
Buried 6" (Max.) (Meter House to Edge of Pad)	±395ft
Buried 6" (Max.) (Edge of Pad to Proposed Liquid Pipeline ROW In Progress)	±35ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±430ft

Proposed Gas Pipeline	Length
=====	
Buried 8" (Meter House to Edge of Pad)	±395ft
Buried 8" (Edge of Pad to Existing 16" Buried Gas Pipeline)	±385ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±780ft

Legend

● Well - Proposed	- - - Gas Pipeline - Proposed	- - - Liquid Pipeline - Proposed	- - - Road - Proposed	■ Bureau of Land Management	■ State
● Well - Existing	- - - Gas Pipeline - To Be Upgraded	- - - Liquid Pipeline - Existing	- - - Road - Existing	■ Indian Reservation	■ Private
■ Well Pad	- - - Gas Pipeline - Existing				

WELL PAD - MORGAN STATE 921-36E

TOPO D
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

**Kerr-McGee Oil &
Gas Onshore L.P.**

1099 18th Street
Denver, Colorado 80202



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Fax 307-674-0182

SCALE: 1" = 2,000ft

DRAWN: TL

REVISED:

NAD83 USP Central

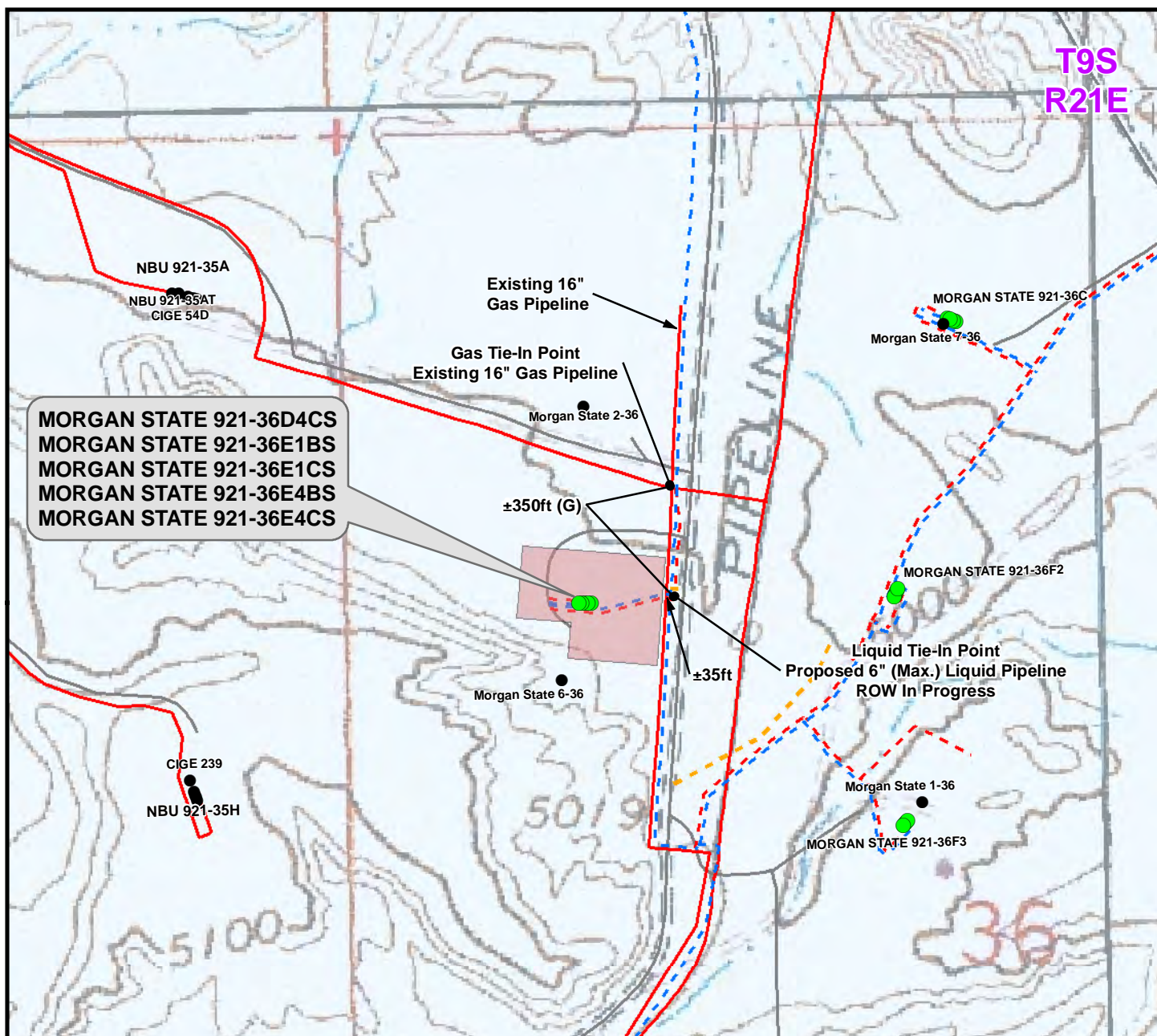
DATE: 11 Nov 2011

DATE:

SHEET NO:

14

14 OF 17



Proposed Liquid Pipeline	Length
-----	-----
Buried 6"(Max.) (Meter House to Edge of Pad)	±395ft
Buried 6"(Max.) (Edge of Pad to Proposed Liquid Pipeline ROW In Progress)	±35ft
TOTAL PROPOSED BURIED LIQUID PIPELINE =	±430ft

Proposed Gas Pipeline	Length
-----	-----
Buried 8" (Meter House to Edge of Pad)	±395ft
Buried 8" (Edge of Pad to Existing 16" Buried Gas Pipeline)	±385ft
TOTAL PROPOSED BURIED GAS PIPELINE =	±780ft

Legend

● Well - Proposed	■ Well Pad - Proposed	- - - Gas Pipeline - Proposed	- - - Liquid Pipeline - Proposed	- - - Road - Proposed	■ Bureau of Land Management
● Well - Existing	■ Well Pad - Existing	- - - Gas Pipeline - To Be Upgraded	- - - Liquid Pipeline - Existing	- - - Road - Existing	■ Indian Reservation
		- - - Gas Pipeline - Existing			■ State
					■ Private

WELL PAD - MORGAN STATE 921-36E

TOPO D2 (PAD & PIPELINE DETAIL)
 MORGAN STATE 921-36D4CS,
 MORGAN STATE 921-36E1BS,
 MORGAN STATE 921-36E1CS,
 MORGAN STATE 921-36E4BS &
 MORGAN STATE 921-36E4CS
 LOCATED IN SECTION 36, T9S, R21E,
 S.L.B.&M., UTAH COUNTY, UTAH

**Kerr-McGee Oil &
 Gas Onshore L.P.**

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SCALE: 1" = 500ft

DRAWN: TL

REVISED:

NAD83 USP Central

DATE: 11 Nov 2011

DATE:

SHEET NO:

15

15 OF 17

 Well - Proposed
 Well Pad
 Gas Pipeline - Proposed
 Liquid Pipeline - Proposed
 Road - Proposed
 Bureau of Land Management

 Bottom Hole - Proposed
 Lease Boundary
 Gas Pipeline - To Be Upgraded
 Liquid Pipeline - Existing
 Road - Existing
 Indian Reservation

 Bottom Hole - Existing
 Gas Pipeline - Existing
 State

 Well Path
 Private

TOPO E
MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS,
MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS &
MORGAN STATE 921-36E4CS
LOCATED IN SECTION 36, T9S, R21E,
S.L.B.&M., UINTAH COUNTY, UTAH

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Denver, Colorado 80202**



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Sheridan, Wyoming 82801
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Fax 307-674-0182

SHEET NO:

16

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**Kerr-McGee Oil & Gas Onshore, LP
WELL PAD – MORGAN STATE 921-36E
WELLS – MORGAN STATE 921-36D4CS,
MORGAN STATE 921-36E1BS, MORGAN STATE 921-36E1CS,
MORGAN STATE 921-36E4BS & MORGAN STATE 921-36E4CS
Section 36, T9S, R21E, S.L.B.&M.**

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 19.2 miles to the proposed access road to the west. Follow road flags in a westerly direction approximately 65 feet to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 42.7 miles in a southerly direction.

WELL DETAILS: MORGAN STATE 921-36E1CS

GL 5007 & KB 4 @ 5011.00ft (ASSUMED)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	14527933.51	2058867.92	39° 59' 44.005 N	109° 30' 21.488 W

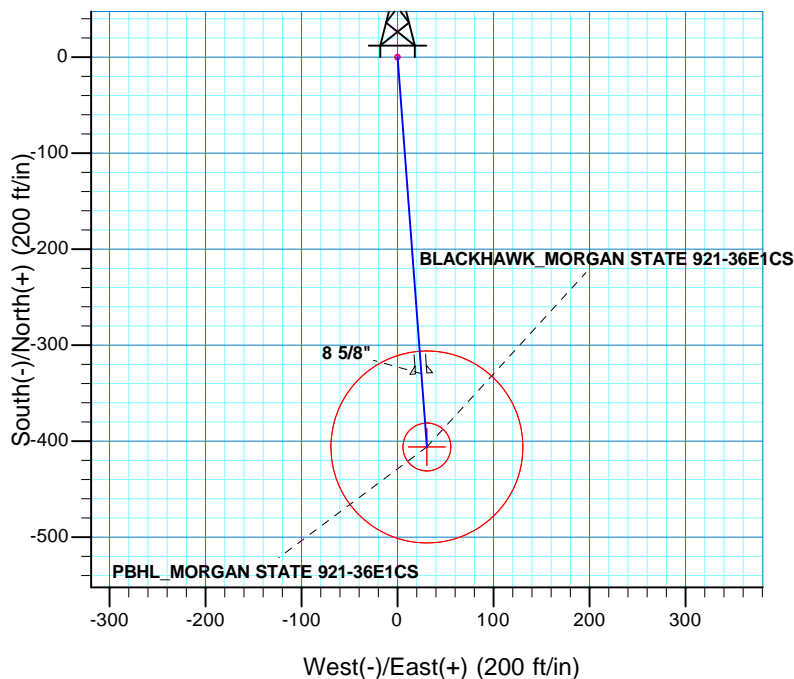
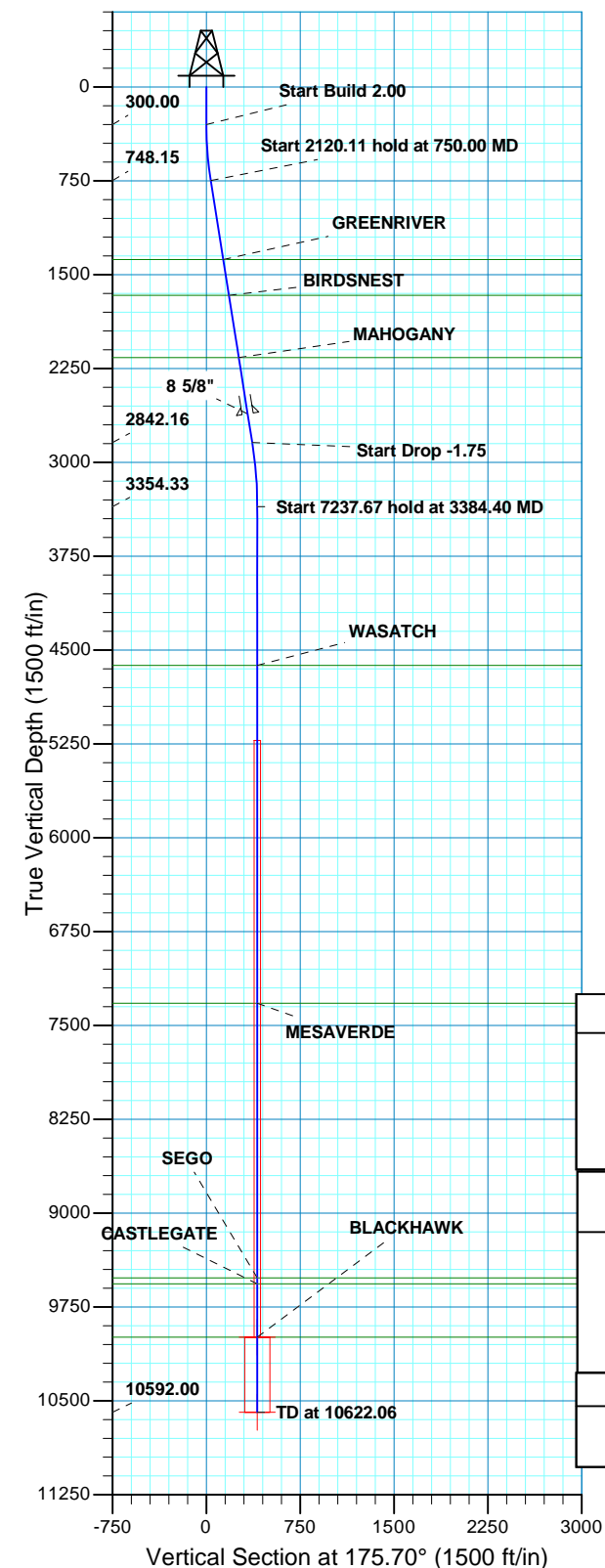
DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BLACKHAWK	9992.00	-406.09	30.53	14527527.98	2058905.26	39° 59' 39.991 N	109° 30' 21.096 W	Circle (Radius: 25.00)
- plan hits target center								
PBHL	10592.00	-406.09	30.53	14527527.98	2058905.26	39° 59' 39.991 N	109° 30' 21.096 W	Circle (Radius: 100.00)
- plan hits target center								



Azimuths to True North
Magnetic North: 11.02°

Magnetic Field
Strength: 52278.4snT
Dip Angle: 65.85°
Date: 2011/12/05
Model: IGRF2010



SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	
750.00	9.00	175.70	748.15	-35.17	2.64	2.00	175.70	35.27	
2870.11	9.00	175.70	2842.16	-365.90	27.51	0.00	0.00	366.93	
3384.40	0.00	0.00	3354.33	-406.09	30.53	1.75	180.00	407.24	
10622.06	0.00	0.00	10592.00	-406.09	30.53	0.00	0.00	407.24	PBHL_MORGAN STATE 921-36E1CS

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N

Geodetic System: Universal Transverse Mercator (US Survey Feet)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: Zone 12N (114 W to 108 W)
Location: SECTION 36 T9S R21E
System Datum: Mean Sea Level

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1379.00	1388.71	GREENRIVER
1665.00	1678.28	BIRDSNEST
2163.00	2182.48	MAHOGANY
4623.00	4653.06	WASATCH
7324.00	7354.06	MESAVERDE
9518.00	9548.06	SEGO
9566.00	9596.06	CASTLEGATE
9992.00	10022.06	BLACKHAWK

CASING DETAILS

TVD	MD	Name	Size
2613.00	2638.09	8 5/8"	8.625



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

MORGAN STATE 921-36E PAD

MORGAN STATE 921-36E1CS

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

05 December, 2011





SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36E1CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36E1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	MORGAN STATE 921-36E PAD, SECTION 36 T9S R21E			
Site Position:		Northing:	14,527,931.66 usft	Latitude: 39° 59' 43.984 N
From:	Lat/Long	Easting:	2,058,887.84 usft	Longitude: 109° 30' 21.233 W
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.96 °

Well	MORGAN STATE 921-36E1CS, 1538 FNL 791 FWL			
Well Position	+N/-S	2.19 ft	Northing:	14,527,933.51 usft
	+E/-W	-19.89 ft	Easting:	2,058,867.91 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level: 5,007.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2011/12/05	11.02	65.85	52,278

Design	PLAN #1 PRELIMINARY			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	175.70

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
750.00	9.00	175.70	748.15	-35.17	2.64	2.00	2.00	0.00	175.70	
2,870.11	9.00	175.70	2,842.16	-365.90	27.51	0.00	0.00	0.00	0.00	
3,384.40	0.00	0.00	3,354.33	-406.09	30.53	1.75	-1.75	0.00	180.00	
10,622.06	0.00	0.00	10,592.00	-406.09	30.53	0.00	0.00	0.00	0.00	PBHL_MORGAN ST/



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36E1CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36E1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
400.00	2.00	175.70	399.98	-1.74	0.13	1.75	2.00	2.00	0.00
500.00	4.00	175.70	499.84	-6.96	0.52	6.98	2.00	2.00	0.00
600.00	6.00	175.70	599.45	-15.65	1.18	15.69	2.00	2.00	0.00
700.00	8.00	175.70	698.70	-27.80	2.09	27.88	2.00	2.00	0.00
750.00	9.00	175.70	748.15	-35.17	2.64	35.27	2.00	2.00	0.00
Start 2120.11 hold at 750.00 MD									
800.00	9.00	175.70	797.54	-42.97	3.23	43.09	0.00	0.00	0.00
900.00	9.00	175.70	896.31	-58.57	4.40	58.74	0.00	0.00	0.00
1,000.00	9.00	175.70	995.07	-74.17	5.58	74.38	0.00	0.00	0.00
1,100.00	9.00	175.70	1,093.84	-89.77	6.75	90.02	0.00	0.00	0.00
1,200.00	9.00	175.70	1,192.61	-105.37	7.92	105.67	0.00	0.00	0.00
1,300.00	9.00	175.70	1,291.38	-120.97	9.10	121.31	0.00	0.00	0.00
1,388.71	9.00	175.70	1,379.00	-134.81	10.14	135.19	0.00	0.00	0.00
GREENRIVER									
1,400.00	9.00	175.70	1,390.15	-136.57	10.27	136.95	0.00	0.00	0.00
1,500.00	9.00	175.70	1,488.92	-152.17	11.44	152.60	0.00	0.00	0.00
1,600.00	9.00	175.70	1,587.69	-167.77	12.61	168.24	0.00	0.00	0.00
1,678.28	9.00	175.70	1,665.00	-179.98	13.53	180.48	0.00	0.00	0.00
BIRDSNEST									
1,700.00	9.00	175.70	1,686.46	-183.37	13.79	183.88	0.00	0.00	0.00
1,800.00	9.00	175.70	1,785.22	-198.96	14.96	199.53	0.00	0.00	0.00
1,900.00	9.00	175.70	1,883.99	-214.56	16.13	215.17	0.00	0.00	0.00
2,000.00	9.00	175.70	1,982.76	-230.16	17.31	230.81	0.00	0.00	0.00
2,100.00	9.00	175.70	2,081.53	-245.76	18.48	246.46	0.00	0.00	0.00
2,182.48	9.00	175.70	2,163.00	-258.63	19.45	259.36	0.00	0.00	0.00
MAHOGANY									
2,200.00	9.00	175.70	2,180.30	-261.36	19.65	262.10	0.00	0.00	0.00
2,300.00	9.00	175.70	2,279.07	-276.96	20.83	277.74	0.00	0.00	0.00
2,400.00	9.00	175.70	2,377.84	-292.56	22.00	293.39	0.00	0.00	0.00
2,500.00	9.00	175.70	2,476.61	-308.16	23.17	309.03	0.00	0.00	0.00
2,600.00	9.00	175.70	2,575.38	-323.76	24.34	324.67	0.00	0.00	0.00
2,638.09	9.00	175.70	2,613.00	-329.70	24.79	330.63	0.00	0.00	0.00
8 5/8"									
2,700.00	9.00	175.70	2,674.14	-339.36	25.52	340.32	0.00	0.00	0.00
2,800.00	9.00	175.70	2,772.91	-354.96	26.69	355.96	0.00	0.00	0.00
2,870.11	9.00	175.70	2,842.16	-365.90	27.51	366.93	0.00	0.00	0.00
Start Drop -1.75									
2,900.00	8.48	175.70	2,871.70	-370.42	27.85	371.47	1.75	-1.75	0.00
3,000.00	6.73	175.70	2,970.82	-383.62	28.84	384.70	1.75	-1.75	0.00
3,100.00	4.98	175.70	3,070.29	-393.78	29.61	394.89	1.75	-1.75	0.00
3,200.00	3.23	175.70	3,170.03	-400.91	30.15	402.05	1.75	-1.75	0.00
3,300.00	1.48	175.70	3,269.95	-405.01	30.45	406.15	1.75	-1.75	0.00
3,384.40	0.00	0.00	3,354.33	-406.09	30.53	407.24	1.75	-1.75	0.00
Start 7237.67 hold at 3384.40 MD									
3,400.00	0.00	0.00	3,369.94	-406.09	30.53	407.24	0.00	0.00	0.00
3,500.00	0.00	0.00	3,469.94	-406.09	30.53	407.24	0.00	0.00	0.00
3,600.00	0.00	0.00	3,569.94	-406.09	30.53	407.24	0.00	0.00	0.00
3,700.00	0.00	0.00	3,669.94	-406.09	30.53	407.24	0.00	0.00	0.00



SDI
Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36E1CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36E1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,800.00	0.00	0.00	3,769.94	-406.09	30.53	407.24	0.00	0.00	0.00
3,900.00	0.00	0.00	3,869.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,000.00	0.00	0.00	3,969.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,100.00	0.00	0.00	4,069.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,200.00	0.00	0.00	4,169.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,300.00	0.00	0.00	4,269.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,400.00	0.00	0.00	4,369.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,500.00	0.00	0.00	4,469.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,600.00	0.00	0.00	4,569.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,653.06	0.00	0.00	4,623.00	-406.09	30.53	407.24	0.00	0.00	0.00
WASATCH									
4,700.00	0.00	0.00	4,669.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,800.00	0.00	0.00	4,769.94	-406.09	30.53	407.24	0.00	0.00	0.00
4,900.00	0.00	0.00	4,869.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,000.00	0.00	0.00	4,969.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,100.00	0.00	0.00	5,069.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,200.00	0.00	0.00	5,169.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,300.00	0.00	0.00	5,269.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,400.00	0.00	0.00	5,369.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,500.00	0.00	0.00	5,469.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,600.00	0.00	0.00	5,569.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,700.00	0.00	0.00	5,669.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,800.00	0.00	0.00	5,769.94	-406.09	30.53	407.24	0.00	0.00	0.00
5,900.00	0.00	0.00	5,869.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,000.00	0.00	0.00	5,969.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,100.00	0.00	0.00	6,069.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,200.00	0.00	0.00	6,169.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,300.00	0.00	0.00	6,269.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,400.00	0.00	0.00	6,369.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,500.00	0.00	0.00	6,469.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,600.00	0.00	0.00	6,569.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,700.00	0.00	0.00	6,669.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,800.00	0.00	0.00	6,769.94	-406.09	30.53	407.24	0.00	0.00	0.00
6,900.00	0.00	0.00	6,869.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,000.00	0.00	0.00	6,969.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,100.00	0.00	0.00	7,069.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,200.00	0.00	0.00	7,169.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,300.00	0.00	0.00	7,269.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,354.06	0.00	0.00	7,324.00	-406.09	30.53	407.24	0.00	0.00	0.00
MESAVERDE									
7,400.00	0.00	0.00	7,369.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,500.00	0.00	0.00	7,469.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,600.00	0.00	0.00	7,569.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,700.00	0.00	0.00	7,669.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,800.00	0.00	0.00	7,769.94	-406.09	30.53	407.24	0.00	0.00	0.00
7,900.00	0.00	0.00	7,869.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,000.00	0.00	0.00	7,969.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,100.00	0.00	0.00	8,069.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,200.00	0.00	0.00	8,169.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,300.00	0.00	0.00	8,269.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,400.00	0.00	0.00	8,369.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,500.00	0.00	0.00	8,469.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,600.00	0.00	0.00	8,569.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,700.00	0.00	0.00	8,669.94	-406.09	30.53	407.24	0.00	0.00	0.00



SDI Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36E1CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36E1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	0.00	0.00	8,769.94	-406.09	30.53	407.24	0.00	0.00	0.00
8,900.00	0.00	0.00	8,869.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,000.00	0.00	0.00	8,969.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,100.00	0.00	0.00	9,069.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,200.00	0.00	0.00	9,169.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,300.00	0.00	0.00	9,269.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,400.00	0.00	0.00	9,369.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,500.00	0.00	0.00	9,469.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,548.06	0.00	0.00	9,518.00	-406.09	30.53	407.24	0.00	0.00	0.00
SEGO									
9,596.06	0.00	0.00	9,566.00	-406.09	30.53	407.24	0.00	0.00	0.00
CASTLEGATE									
9,600.00	0.00	0.00	9,569.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,700.00	0.00	0.00	9,669.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,800.00	0.00	0.00	9,769.94	-406.09	30.53	407.24	0.00	0.00	0.00
9,900.00	0.00	0.00	9,869.94	-406.09	30.53	407.24	0.00	0.00	0.00
10,000.00	0.00	0.00	9,969.94	-406.09	30.53	407.24	0.00	0.00	0.00
10,022.06	0.00	0.00	9,992.00	-406.09	30.53	407.24	0.00	0.00	0.00
BLACKHAWK - BLACKHAWK_MORGAN STATE 921-36E1CS									
10,100.00	0.00	0.00	10,069.94	-406.09	30.53	407.24	0.00	0.00	0.00
10,200.00	0.00	0.00	10,169.94	-406.09	30.53	407.24	0.00	0.00	0.00
10,300.00	0.00	0.00	10,269.94	-406.09	30.53	407.24	0.00	0.00	0.00
10,400.00	0.00	0.00	10,369.94	-406.09	30.53	407.24	0.00	0.00	0.00
10,500.00	0.00	0.00	10,469.94	-406.09	30.53	407.24	0.00	0.00	0.00
10,600.00	0.00	0.00	10,569.94	-406.09	30.53	407.24	0.00	0.00	0.00
10,622.06	0.00	0.00	10,592.00	-406.09	30.53	407.24	0.00	0.00	0.00
TD at 10622.06 - PBHL_MORGAN STATE 921-36E1CS									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
BLACKHAWK_MORGAI	0.00	0.00	9,992.00	-406.09	30.53	14,527,527.99	2,058,905.25	39° 59' 39.991 N	109° 30' 21.096 W
- plan hits target center									
- Circle (radius 25.00)									
PBHL_MORGAN STATI	0.00	0.00	10,592.00	-406.09	30.53	14,527,527.99	2,058,905.25	39° 59' 39.991 N	109° 30' 21.096 W
- plan hits target center									
- Circle (radius 100.00)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
2,638.09	2,613.00	8 5/8"	8.625	11.000	



SDI Planning Report



Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MORGAN STATE 921-36E1CS
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Project:	UTAH - UTM (feet), NAD27, Zone 12N	MD Reference:	GL 5007 & KB 4 @ 5011.00ft (ASSUMED)
Site:	MORGAN STATE 921-36E PAD	North Reference:	True
Well:	MORGAN STATE 921-36E1CS	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,388.71	1,379.00	GREENRIVER			
1,678.28	1,665.00	BIRDSNEST			
2,182.48	2,163.00	MAHOGANY			
4,653.06	4,623.00	WASATCH			
7,354.06	7,324.00	MESAVERDE			
9,548.06	9,518.00	SEGO			
9,596.06	9,566.00	CASTLEGATE			
10,022.06	9,992.00	BLACKHAWK			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
300.00	300.00	0.00	0.00	Start Build 2.00	
750.00	748.15	-35.17	2.64	Start 2120.11 hold at 750.00 MD	
2,870.11	2,842.16	-365.90	27.51	Start Drop -1.75	
3,384.40	3,354.33	-406.09	30.53	Start 7237.67 hold at 3384.40 MD	
10,622.06	10,592.00	-406.09	30.53	TD at 10622.06	

MORGAN STATE 921-36D4CS

Surface:	1540 FNL / 811 FWL	SWNW	Lot
BHL:	1297 FNL / 823 FWL	NWNW	Lot

MORGAN STATE 921-36E1BS

Surface:	1539 FNL / 801 FWL	SWNW	Lot
BHL:	1612 FNL / 818 FWL	SWNW	Lot

MORGAN STATE 921-36E1CS

Surface:	1538 FNL / 791 FWL	SWNW	Lot
BHL:	1944 FNL / 821 FWL	SWNW	Lot

MORGAN STATE 921-36E4BS

Surface:	1537 FNL / 781 FWL	SWNW	Lot
BHL:	2276 FNL / 824 FWL	SWNW	Lot

MORGAN STATE 921-36E4CS

Surface:	1536 FNL / 771 FWL	SWNW	Lot
BHL:	2600 FNL / 818 FWL	SWNW	Lot

Pad: MORGAN STATE 921-36E PAD

Section 36 T9S R21E

Mineral Lease: ML-22265

Uintah County, Utah

Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

A. Existing Roads:

Existing roads consist of county and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

B. Planned Access Roads:

Approximately $\pm 65'$ (0.01 miles) of new access road is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

C. Location of Existing and Proposed Facilities:

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

Gathering Facilities:

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is $\pm 780'$ and the individual segments are broken up as follows:

- ±395' (0.1 miles) –New 8" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±385' (0.1 miles) –New 8" buried gas pipeline from the edge of pad to the existing 16' buried gas pipeline. Please refer to Topo D2 - Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is ±430' and the individual segments are broken up as follows:

- ±395' (0.1 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 - Pad and Pipeline Detail.
- ±35' (0.01 miles) –New 6" buried liquid pipeline from the edge of pad to the proposed liquid pipeline ROW in progress. Please refer to Topo D2 - Pad and Pipeline Detail.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

D. Location and Type of Water Supply:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

F. Methods for Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E
Ace Oilfield in Sec. 2 T6S R20E
MC&MC in Sec. 12 T6S R19E
Pipeline Facility in Sec. 36 T9S R20E
Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E
Bonanza Evaporation Pond in Sec. 2 T10S R23E
Ouray #1 SWD in Sec. 1 T9S R21E
NBU 159 SWD in Sec. 35 T9S R21E
CIGE 112D SWD in Sec. 19 T9S R21E
CIGE 114 SWD in Sec. 34 T9S R21E
NBU 921-34K SWD in Sec. 34 T9S R21E
NBU 921-33F SWD in Sec. 33 T9S R21E
NBU 921-34L SWD in Sec. 34 T9S R21E

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

Unless otherwise approved, no oil or other oil based drill additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water, biodegradable polymer soap, bentonite clay, and /or non-toxic additives will be used in the system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions, or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum

trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be released into the pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternative is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as the hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods. (e.g. solidification)

Any additional pits necessary for subsequent operations, such as temporary flare pits, or workover pits, will be contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of the work.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

Materials Management

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

G. Ancillary Facilities:

None are anticipated.

H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

Interim Reclamation

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/

completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

Final Reclamation

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

J. Surface/Mineral Ownership:

SITLA
675 East 500 South, Suite 500
Salt Lake City, UT 84102

L. Other Information:

None

M. Lessee's or Operators' Representative & Certification:

Danielle Piernot
Regulatory Analyst II
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6156

Tommy Thompson
General Manager, Drilling
Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
Denver, CO 80217-3779
(720) 929-6724


Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.



Danielle Piernot

December 19, 2011

Date



Kerr-McGee Oil & Gas Onshore LP
PO Box 173779
DENVER, CO 80217-3779

December 14, 2011

Ms. Diana Mason
Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11
Morgan State 921-36E1CS
T9S-R21E
Section 36: SWNW (Surface), SWNW (Bottom Hole)
Surface: 1538' FNL, 791' FWL
Bottom Hole: 1944' FNL, 821' FWL
Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

A handwritten signature in blue ink that reads 'Joe Matney'.

Joe Matney
Sr. Staff Landman

RECEIVED: December 19, 2011

From: Jim Davis
To: APD APPROVAL
CC: Danielle Piernot; Julie Jacobson
Date: 2/23/2012 3:22 PM
Subject: APD Approval: the Kerr McGee Morgan State wells

The following wells have been approved by SITLA including arch and paleo clearance.

4304752246	Morgan State 921-36G4BS
4304752253	Morgan State 921-36G4CS
4304752255	Morgan State 921-36J1CS
4304752256	Morgan State 921-36J4BS
4304752281	Morgan State 921-36F1BS
4304752282	Morgan State 921-36F1CS
4304752283	Morgan State 921-36G1BS
4304752284	Morgan State 921-36G1CS
4304752285	Morgan State 921-36F4BS
4304752286	Morgan State 921-36K1BS
4304752287	Morgan State 921-36K1CS
4304752247	Morgan State 921-36P1BS
4304752248	Morgan State 921-36P1CS
4304752249	Morgan State 921-36I4BS
4304752250	Morgan State 921-36I4CS
4304752252	Morgan State 921-36P4BS
4304752263	Morgan State 921-36K4CS
4304752264	Morgan State 921-36N1BS
4304752265	Morgan State 921-36N1CS
4304752266	Morgan State 921-36N4BS
4304752276	Morgan State 921-36D4CS
4304752277	Morgan State 921-36E1BS
4304752278	Morgan State 921-36E1CS
4304752279	Morgan State 921-36E4BS
4304752280	Morgan State 921-36E4CS
4304752245	Morgan State 921-36O4CS
4304752254	Morgan State 921-36O1CS
4304752267	Morgan State 921-36O1BS
4304752257	Morgan State 921-36K4BS
4304752258	Morgan State 921-36L1BS
4304752259	Morgan State 921-36L1CS
4304752260	Morgan State 921-36M1BS
4304752261	Morgan State 921-36M1CS
4304752262	Morgan State 921-36M4BS
4304752272	Morgan State 921-36B4CS
4304752273	Morgan State 921-36C4BS
4304752274	Morgan State 921-36C4CS
4304752275	Morgan State 921-36D1CS

There are eight more wells on two pads in this section, the 36A pad and the 36I pad, that have not yet been approved. Anadarko is gathering reclamation cost figures on pads similar to those as part of the process of acquiring adequate SITLA bonds.

-Jim

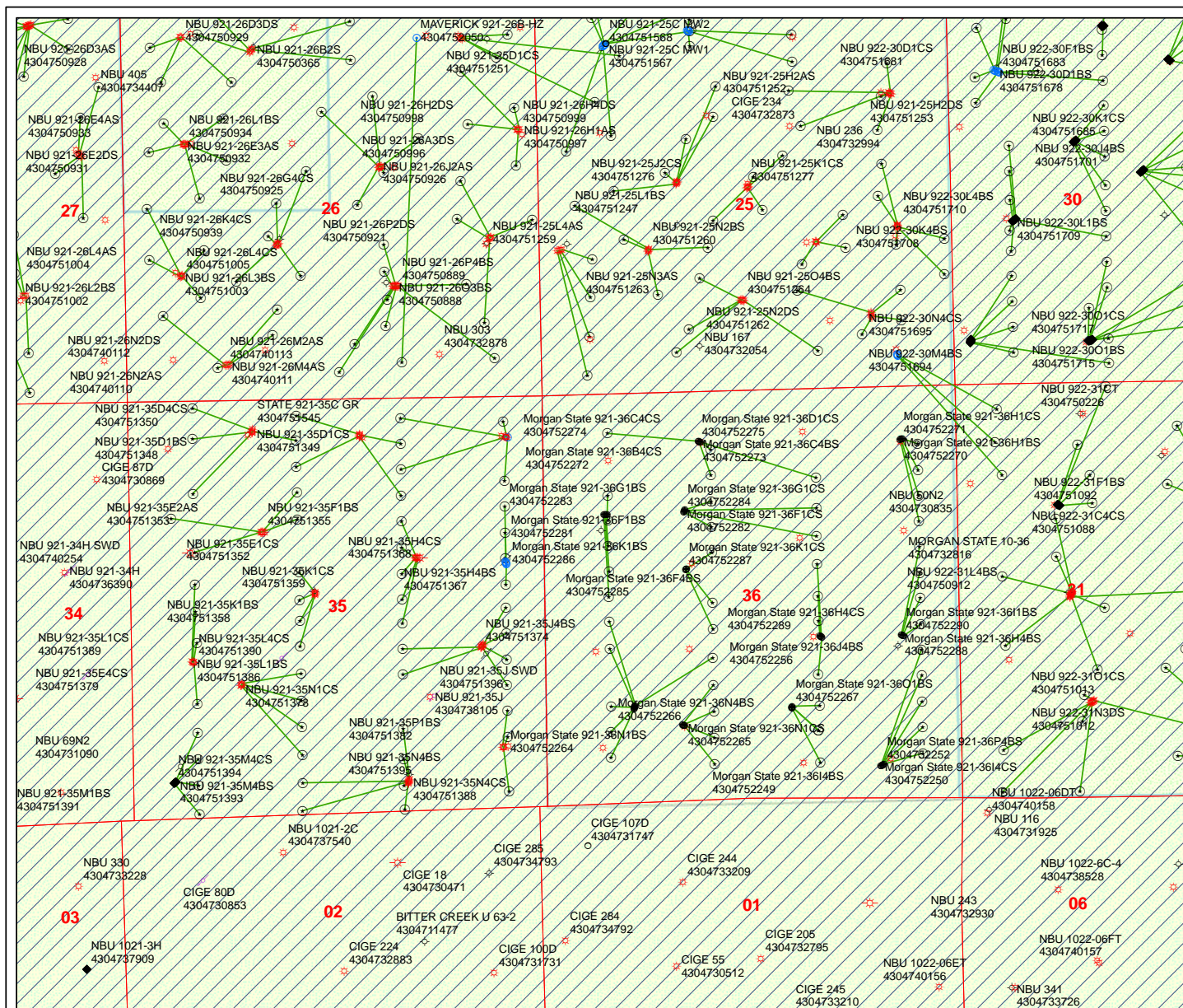
Jim Davis
Utah Trust Lands Administration
jimdavis1@utah.gov

RECEIVED: February 23, 2012

API Well Number: 43047522780000

Phone: (801) 538-5156

RECEIVED: February 23, 2012



API Number: 4304752278

Well Name: Morgan State 921-36E1CS

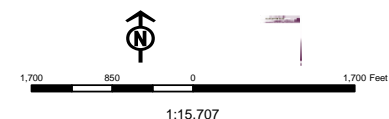
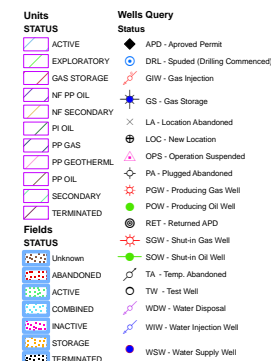
Township T0.9 Range R2.1 Section 36

Meridian: SLBM

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

Map Prepared:

Map Produced by Diana Mason



Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. Morgan State 921-36E1CS			
String	Surf	Prod		
Casing Size(in)	8.625	4.500		
Setting Depth (TVD)	2585	10592		
Previous Shoe Setting Depth (TVD)	0	2585		
Max Mud Weight (ppg)	8.4	13.0		
BOPE Proposed (psi)	500	5000		
Casing Internal Yield (psi)	3390	10690		
Operators Max Anticipated Pressure (psi)	6991	12.7		

Calculations	Surf String	8.625	"	
Max BHP (psi)	.052*Setting Depth*MW=	1129		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	819	NO	air drill
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	560	NO	Reasonable depth in area
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	560	NO	
Required Casing/BOPE Test Pressure=		2373	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		0	psi *Assumes 1psi/ft frac gradient	

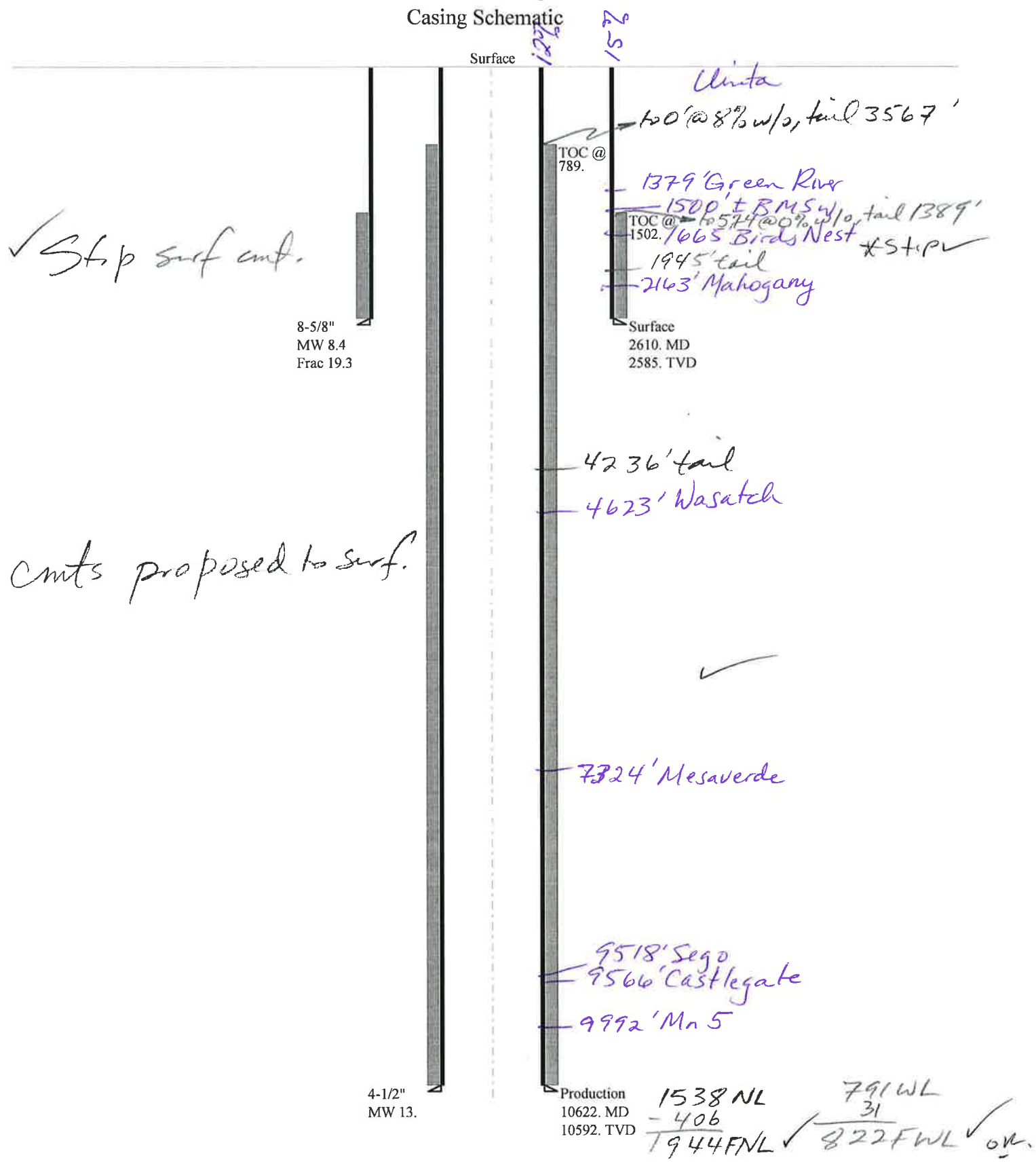
Calculations	Prod String	4.500	"	
Max BHP (psi)	.052*Setting Depth*MW=	7160		
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=	5889	NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=	4830	YES	OK
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=	5398	NO	Reasonable
Required Casing/BOPE Test Pressure=		5000	psi	
*Max Pressure Allowed @ Previous Casing Shoe=		2585	psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient	

Calculations	String		"	
Max BHP (psi)	.052*Setting Depth*MW=			
			BOPE Adequate For Drilling And Setting Casing at Depth?	
MASP (Gas) (psi)	Max BHP-(0.12*Setting Depth)=		NO	
MASP (Gas/Mud) (psi)	Max BHP-(0.22*Setting Depth)=		NO	
			*Can Full Expected Pressure Be Held At Previous Shoe?	
Pressure At Previous Shoe	Max BHP-.22*(Setting Depth - Previous Shoe Depth)=		NO	
Required Casing/BOPE Test Pressure=			psi	
*Max Pressure Allowed @ Previous Casing Shoe=			psi *Assumes 1psi/ft frac gradient	

43047522780000 Morgan State 921-36E1CS

Casing Schematic



Well name:	43047522780000 Morgan State 921-36E1CS		
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.		
String type:	Surface	Project ID:	43-047-52278
Location:	UINTAH	COUNTY	

Design parameters:**Collapse**

Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 110 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,502 ft

Burst

Max anticipated surface pressure: 2,275 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,585 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 2,286 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 326 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 9 °

Re subsequent strings:

Next setting depth: 10,592 ft
Next mud weight: 13.000 ppg
Next setting BHP: 7,153 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,585 ft
Injection pressure: 2,585 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2610	8.625	28.00	I-55	LT&C	2585	2610	7.892	103356
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1128	1880	1.667	2585	3390	1.31	72.4	348	4.81 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & Mining

Phone: 801-538-5357
FAX: 801-359-3940

Date: March 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2585 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name:	43047522780000 Morgan State 921-36E1CS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Production	Project ID: 43-047-52278
Location:	UINTAH COUNTY	

Design parameters:**Collapse**

Mud weight: 13.000 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 222 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 789 ft

Burst

Max anticipated surface pressure: 4,823 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 7,153 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Directional well information:

Kick-off point 300 ft
Departure at shoe: 407 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Tension is based on air weight.
Neutral point: 8,564 ft

Estimated cost: 159,087 (\$)

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	5000	4.5	11.60	HCP-110	DQX	4970	5000	3.875	132000
1	5622	4.5	11.60	HCP-110	LT&C	10592	10622	3.875	27087

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	3356	8122	2.420	5916	10690	1.81	122.9	367.2	2.99 B
1	7153	8650	1.209	7153	10690	1.49	65.2	279	4.28 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & Mining

Phone: 801-538-5357
FAX: 801-359-3940

Date: March 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 10592 ft, a mud weight of 13 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

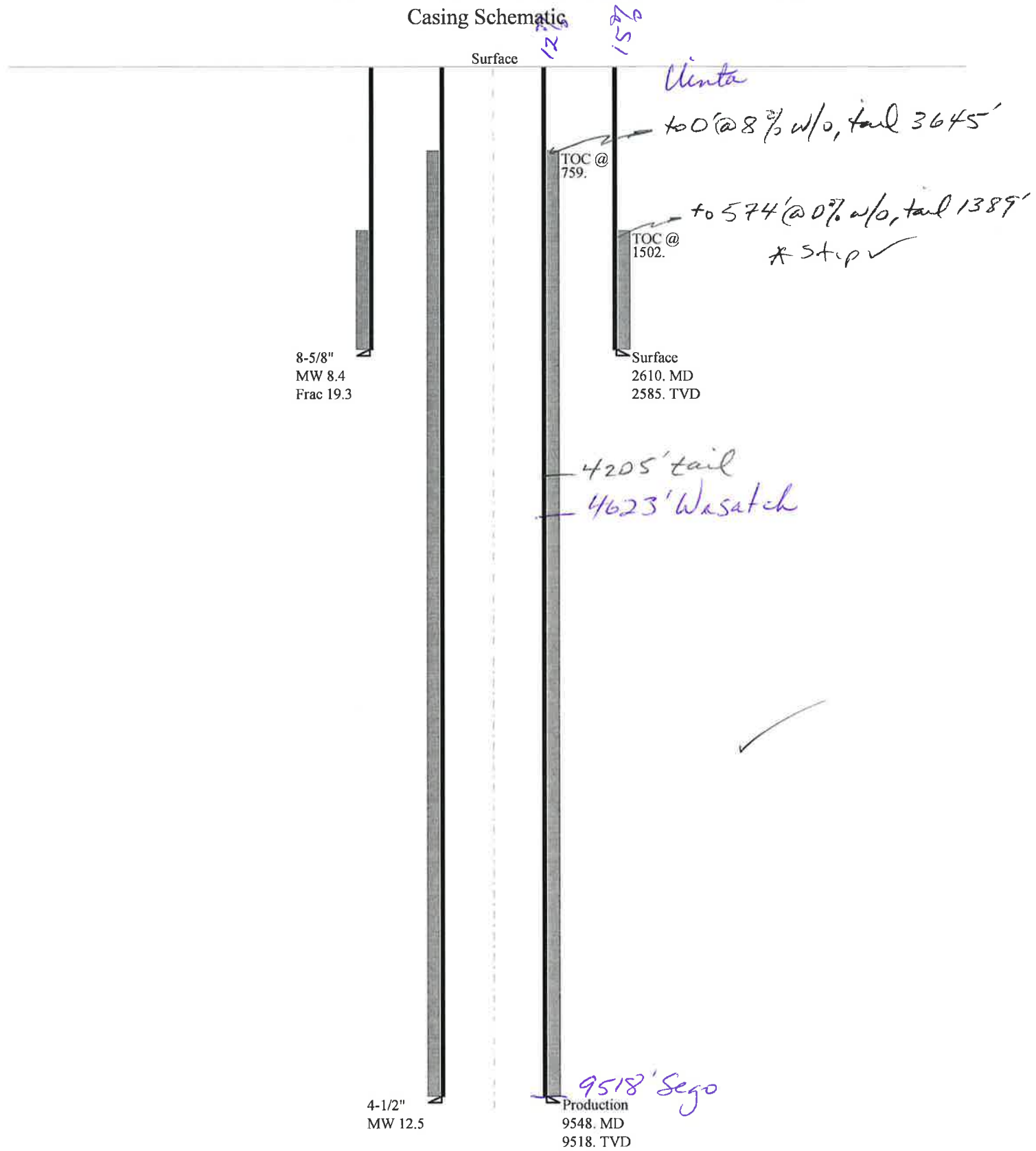
Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

43047522780000 Morgan State 921-36E1CS

Casing Schematic



Well name:	43047522780000 Morgan State 921-36E1CS	
Operator:	KERR-MCGEE OIL & GAS ONSHORE, L.P.	
String type:	Surface	Project ID: 43-047-52278
Location:	UINTAH COUNTY	

Design parameters:**Collapse**

Mud weight: 8.400 ppg
Design is based on evacuated pipe.

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 110 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 1,502 ft

Burst

Max anticipated surface pressure: 2,275 psi
Internal gradient: 0.120 psi/ft
Calculated BHP 2,585 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.70 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.50 (B)

Tension is based on air weight.
Neutral point: 2,286 ft

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 326 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 9 °

Re subsequent strings:

Next setting depth: 9,518 ft
Next mud weight: 12.500 ppg
Next setting BHP: 6,180 psi
Fracture mud wt: 19.250 ppg
Fracture depth: 2,585 ft
Injection pressure: 2,585 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2610	8.625	28.00	I-55	LT&C	2585	2610	7.892	103356

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1128	1880	1.667	2585	3390	1.31	72.4	348	4.81 J

Prepared Helen Sadik-Macdonald
by: Div of Oil, Gas & Mining

Phone: 801-538-5357
FAX: 801-359-3940

Date: March 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 2585 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

Well name: 43047522780000 Morgan State 921-36E1CS	
Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.	Project ID: 43-047-52278
String type: Production	
Location: UINTAH COUNTY	

Design parameters:**Collapse**

Mud weight: 12.500 ppg
Internal fluid density: 1.500 ppg

Minimum design factors:**Collapse:**

Design factor 1.125

Burst:

Design factor 1.00

Environment:

H2S considered? No
Surface temperature: 74 °F
Bottom hole temperature: 207 °F
Temperature gradient: 1.40 °F/100ft
Minimum section length: 100 ft

Cement top: 759 ft

Burst

Max anticipated surface pressure: 4,087 psi
Internal gradient: 0.220 psi/ft
Calculated BHP 6,180 psi

No backup mud specified.

Tension:

8 Round STC: 1.80 (J)
8 Round LTC: 1.80 (J)
Buttress: 1.60 (J)
Premium: 1.50 (J)
Body yield: 1.60 (B)

Directional Info - Build & Drop

Kick-off point 300 ft
Departure at shoe: 407 ft
Maximum dogleg: 2 °/100ft
Inclination at shoe: 0 °

Tension is based on air weight.
Neutral point: 7,770 ft

Estimated cost: 192,034 (\$)

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
2	5000	4.5	11.60	I-80	DQX	4970	5000	3.875	132000
1	4548	4.5	11.60	I-80	LT&C	9518	9548	3.875	60034

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
2	2840	5907	2.080	5180	7780	1.50	110.4	267	2.42 J
1	5439	6360	1.169	6180	7780	1.26	52.8	212	4.02 J

Prepared by: Helen Sadik-Macdonald
Div of Oil, Gas & Mining

Phone: 801-538-5357
FAX: 801-359-3940

Date: March 5, 2012
Salt Lake City, Utah

Remarks:

Collapse is based on a vertical depth of 9518 ft, a mud weight of 12.5 ppg. An internal gradient of .078 psi/ft was used for collapse from TD. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

Engineering responsibility for use of this design will be that of the purchaser.

ON-SITE PREDRILL EVALUATION

Utah Division of Oil, Gas and Mining

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P.
Well Name Morgan State 921-36E1CS
API Number 43047522780000 **APD No** 5066 **Field/Unit** NATURAL BUTTES
Location: 1/4,1/4 SWNW **Sec** 36 **Tw** 9.0S **Rng** 21.0E 1538 FNL 791 FWL
GPS Coord (UTM) 627481 4428329 **Surface Owner**

Participants

Sheila Wopsock, Charles Chase, Danielle Piernot, Doyle Holmes, (Anadarko). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). Alex Hansen (DWR). Chris Jensen and David Hackford, (DOGM).

Regional/Local Setting & Topography

This site is a proposed location which will require pad and reserve pit construction.

The general area is in the central portion of the Natural Buttes Unit, but this section is not part of the unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is approximately six miles. The side drainages are dry except for ephemeral flows. The washes are sometimes rimmed with steep side hills which have exposed sandstone bedrock cliffs along the rims. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Ouray, Utah is approximately 14 road miles to the northwest. Five directional wells will be drilled from this proposed pad. The location will run in an east-west direction on the gradual east slope a sharp rocky point. This point is 400' to the west. No drainage concerns exist, and no diversions will be needed. The pad should be stable and should be a suitable location for five wells, and is the best site available in the immediate area.

Surface Use Plan

Current Surface Use

Wildlfe Habitat

New Road Miles	Well Pad	Src Const Material	Surface Formation
0.01	Width 352 Length 465	Onsite	UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

Environmental Parameters

Affected Floodplains and/or Wetlands N

Flora / Fauna

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, coyote, raptors, small mammals and birds.

Soil Type and Characteristics

Rocky sandy clay loam.

Erosion Issues N**Sedimentation Issues** N**Site Stability Issues** N**Drainage Diversion Required?** N**Berm Required?** N**Erosion Sedimentation Control Required?** N**Paleo Survey Run?** Y **Paleo Potential Observed?** N **Cultural Survey Run?** Y **Cultural Resources?** N**Reserve Pit****Site-Specific Factors****Site Ranking**

Distance to Groundwater (feet)	100 to 200	5
Distance to Surface Water (feet)	>1000	0
Dist. Nearest Municipal Well (ft)	>5280	0
Distance to Other Wells (feet)		20
Native Soil Type	Mod permeability	10
Fluid Type	Fresh Water	5
Drill Cuttings	Normal Rock	0
Annual Precipitation (inches)		0
Affected Populations		
Presence Nearby Utility Conduits	Not Present	0
Final Score		40 1 Sensitivity Level

Characteristics / Requirements

The reserve pit is planned in an area of cut except for 1.3 feet on the east side of pit. The reserve pit will be on the south side of the location. Dimensions are 260' x 100' x 12' deep with two feet of freeboard. Kerr McGee has agreed to line this pit with a 30 mil synthetic liner and a layer of felt sub-liner, and also place an excess cut stockpile adjacent to and east of the pit where it will be somewhat in fill.

Closed Loop Mud Required? N **Liner Required?** Y **Liner Thickness** 30 **Pit Underlayment Required?** Y**Other Observations / Comments**David Hackford
Evaluator1/11/2012
Date / Time

Application for Permit to Drill

Statement of Basis

3/20/2012

Utah Division of Oil, Gas and Mining

Page 1

APD No	API WellNo	Status	Well Type	Surf Owner	CBM
5066	43047522780000	SITLA	GW	S	No
Operator	KERR-MCGEE OIL & GAS ONSHORE, L.P.			Surface Owner-APD	
Well Name	Morgan State 921-36E1CS			Unit	
Field	NATURAL BUTTES			Type of Work	DRILL
Location	SWNW 36 9S 21E S 1538 FNL 791 FWL GPS Coord (UTM) 627488E 4428326N				

Geologic Statement of Basis

Kerr McGee proposes to set 2,620' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 1,500'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 36. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect. Any usable ground water.

 Brad Hill
APD Evaluator

 2/8/2012
Date / Time
Surface Statement of Basis

The general area is in the central portion of the Natural Buttes Unit, but this section is not part of that unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is six miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 42.7 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads.

Five wells will be directionally drilled from this location. They are the Morgan State 921-36D4CS, Morgan State 921-36E1BS, Morgan State 921-36E1CS, Morgan State 921-36E4BS and the Morgan State 921-36E4CS. It will be necessary to place an excess cut stockpile along the east side of the reserve pit where the pit will be in 1.3 feet of fill. The pad should be stable and sufficient for five wells, and is the best site for a location in the immediate area.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Alex Hansen with DWR were invited by email to the pre-site evaluation. Both were present. Kerr McGee personnel were told to consult with SITLA for reclamation standards including seeding mixes to be used.

 David Hackford
Onsite Evaluator

 1/11/2012
Date / Time
Conditions of Approval / Application for Permit to Drill

Category	Condition
-----------------	------------------

RECEIVED: March 20, 2012

Application for Permit to Drill Statement of Basis

3/20/2012

Utah Division of Oil, Gas and Mining

Page 2

Pits	A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed and maintained in the reserve pit.
Pits	The reserve pit should be located on the east side of the location, and an excess cut stockpile shall be placed on the east side of the pit.

WORKSHEET APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 12/19/2011

API NO. ASSIGNED: 43047522780000

WELL NAME: Morgan State 921-36E1CS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995)

PHONE NUMBER: 720 929-6156

CONTACT: Danielle Piernot

PROPOSED LOCATION: SWNW 36 090S 210E

Permit Tech Review: ☒

SURFACE: 1538 FNL 0791 FWL

Engineering Review: ☒

BOTTOM: 1944 FNL 0821 FWL

Geology Review: ☒

COUNTY: UINTAH

LATITUDE: 39.99550

LONGITUDE: -109.50659

UTM SURF EASTINGS: 627488.00

NORTHINGS: 4428326.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 22265

PROPOSED PRODUCING FORMATION(S): BLACKHAWK

SURFACE OWNER: 3 - State

COALBED METHANE: NO

RECEIVED AND/OR REVIEWED:

☒ PLAT☒ Bond: STATE/FEE - 22013542☐ Potash☒ Oil Shale 190-5☐ Oil Shale 190-3☐ Oil Shale 190-13☒ Water Permit: 43-8496☐ RDCC Review:☐ Fee Surface Agreement☒ Intent to Commingle

Commingle Approved

LOCATION AND SITING:

☐ R649-2-3.

Unit:

☐ R649-3-2. General☐ R649-3-3. Exception☒ Drilling Unit

Board Cause No: Cause 173-24

Effective Date: 10/5/2009

Siting: 460' Fr Exterior Lease Boundary

☒ R649-3-11. Directional Drill

Comments: Presite Completed

Stipulations: 3 - Commingle - ddoucet
5 - Statement of Basis - bhll
15 - Directional - dmason
17 - Oil Shale 190-5(b) - dmason
25 - Surface Casing - hmadonald

RECEIVED: March 20, 2012



GARY R. HERBERT
Governor

GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

Permit To Drill

Well Name: Morgan State 921-36E1CS

API Well Number: 43047522780000

Lease Number: ML 22265

Surface Owner: STATE

Approval Date: 3/20/2012

Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-24. The expected producing formation or pool is the BLACKHAWK Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

Duration:

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

Commingle:

In accordance with Board Cause No. 173-24, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

Conditions of Approval:

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Surface casing shall be cemented to the surface.

Additional Approvals:

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan - contact Dustin Doucet
- Significant plug back of the well - contact Dustin Doucet
- Plug and abandonment of the well - contact Dustin Doucet

Notification Requirements:

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

- Within 24 hours following the spudding of the well - contact Carol Daniels
OR
submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website
at <http://oilgas.ogm.utah.gov>
- 24 hours prior to testing blowout prevention equipment - contact Dan Jarvis
- 24 hours prior to cementing or testing casing - contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
- contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

Contact Information:

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 - office
- Dustin Doucet 801-538-5281 - office
801-733-0983 - after office hours
- Dan Jarvis 801-538-5338 - office
801-231-8956 - after office hours

Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) - due within 5 days of spudding the well
- Monthly Status Report (Form 9) - due by 5th day of the following calendar month
- Requests to Change Plans (Form 9) - due prior to implementation
- Written Notice of Emergency Changes (Form 9) - due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) - due prior to implementation
- Report of Water Encountered (Form 7) - due within 30 days after completion
- Well Completion Report (Form 8) - due within 30 days after completion or

plugging

Approved By:

A handwritten signature in black ink, appearing to read "J. Rogers", written over a horizontal line.

For John Rogers
Associate Director, Oil & Gas

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: Morgan State 921-36E1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FNL 0791 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047522780000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER	
<input checked="" type="checkbox"/> SPUD REPORT Date of Spud: 5/12/2012	<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU TRIPLE A BUCKET RIG. DRILLED 20" CONDUCTOR HOLE TO 40'. RAN 14" 36.7# SCHEDULE 10 CONDUCTOR PIPE. CMT W/28 SX READY MIX. SPUD WELL LOCATION ON DATE 5/12/2012 AT TIME 9:30 HRS.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY May 16, 2012		
NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 5/15/2012	

BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By J. Scharnowske Phone Number 720.929.6304
Well Name/Number MORGAN STATE 921-36E1CS
Qtr/Qtr SWNW Section 36 Township 9S Range 21E
Lease Serial Number ML 22265
API Number 4304752278

Spud Notice – Spud is the initial spudding of the well, not drilling out below a casing string.

Date/Time 05/11/2012 11:00 HRS AM ☐ PM ☐

Casing – Please report time casing run starts, not cementing times.

- ☒ Surface Casing
☐ Intermediate Casing
☐ Production Casing
☐ Liner
☐ Other

RECEIVED

MAY 09 2012

DIV. OF OIL, GAS & MINING

Date/Time 05/28/2012 08:00 HRS AM ☐ PM ☐

BOPE

- ☐ Initial BOPE test at surface casing point
☐ BOPE test at intermediate casing point
☐ 30 day BOPE test
☐ Other

Date/Time _____ AM ☐ PM ☐

Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT

435.828.0986 OR LOVEL YOUNG AT 435.781.7051

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217 Phone Number: (720) 929-6029

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752276	MORGAN STATE 921-36D4CS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	18529	5/11/2012		5/16/2012		
Comments: MIRU BUCKET RIG. SPUD WELL LOCATION ON 5/11/2012 AT 15:30 HRS. <i>MVRD BHL: nwnw</i>							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752277	MORGAN STATE 921-36E1BS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	18530	5/12/2012		5/16/2012		
Comments: MIRU BUCKET RIG. SPUD WELL LOCATION ON 5/12/2012 AT 7:00 HRS. <i>MVRD BHL: swnw</i>							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752278	MORGAN STATE 921-36E1CS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
A	99999	18531	5/12/2012		5/16/2012		
Comments: MIRU BUCKET RIG. SPUD WELL LOCATION ON 5/12/2012 AT 9:30 HRS. <i>MVRD BHL: swnw</i>							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

CARA MAHLER

Name (Please Print)

Signature

REGULATORY ANALYST

Title

5/15/2012

Date

RECEIVED

MAY 10 2012

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: Morgan State 921-36E1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FNL 0791 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047522780000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: MATEL BUTTES
COUNTY: UTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 6/2/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. MIRU AIR RIG ON 5/30/2012. DRILLED SURFACE HOLE TO 2635'. RAN SURFACE CASING AND CEMENTED. WELL IS WAITING ON ROTARY RIG. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH WELL COMPLETION REPORT.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY June 04, 2012		
NAME (PLEASE PRINT) Cara Mahler	PHONE NUMBER 720 929-6029	TITLE Regulatory Analyst I
SIGNATURE N/A	DATE 6/4/2012	

Carol Daniels - PRODUCTION CASING ON MORGAN STATE 921-36E1CS

From: "Anadarko - H&P 298" <hp298@gesmail.net>
To: <caroldaniels@utah.gov>
Date: 7/10/2012 8:43 AM
Subject: PRODUCTION CASING ON MORGAN STATE 921-36E1CS

T09S R21E S-36
43 047 52278

CAROL,
WILL TD TODAY 7/10/2012 @ 9,555 , ON MORGAN STATE 921-36E1CS,H&P 298,WE WILL BE RUNNING 41/2
PROD CSG & CEMENTING,WEDNESDAY MORNING 07/11/2012,THEN SKID OVER TO MORGAN STATE 921-36E4BS
ON WEDNESDAY AFTERNOON & DO INITIAL PRESSURE TEST ON BOP,S

Have a nice day

JIM MURRAY
H&P 298
435 828 0957

RECEIVED

JUL 10 2012

DIV. OF OIL, GAS & MINING

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
1. TYPE OF WELL Gas Well		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: Morgan State 921-36E1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FNL 0791 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047522780000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start: <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input checked="" type="checkbox"/> DRILLING REPORT Report Date: 7/12/2012	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION OTHER: <input style="width: 100%;" type="text"/> </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. <div style="display: flex; justify-content: space-between;"> <div style="width: 70%;"> MIRU ROTARY RIG. FINISHED DRILLING FROM 2635' TO 9555' ON 7/10/2012. RAN 4-1/2" 11.6# I-80 PRODUCTION CASING. CEMENTED PRODUCTION CASING. RELEASED H&P 298 RIG ON 7/12/2012. DETAILS OF CEMENT JOB WILL BE INCLUDED WITH THE WELL COMPLETION REPORT. WELL IS WAITING ON FINAL COMPLETION ACTIVITIES. </div> <div style="width: 25%; text-align: center;"> Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY July 20, 2012 </div> </div>		
NAME (PLEASE PRINT) Cara Mahler		PHONE NUMBER 720 929-6029
SIGNATURE N/A		TITLE Regulatory Analyst I
DATE 7/17/2012		

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
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4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FNL 0791 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047522780000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 9/5/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
	<input type="checkbox"/> SIDETRACK TO REPAIR WELL	
	<input type="checkbox"/> TEMPORARY ABANDON	
	<input type="checkbox"/> TUBING REPAIR	
	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. No Activity for the month of August 2012. Well TD at 9,555		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY September 11, 2012		
NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 9/5/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
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PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UINTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input checked="" type="checkbox"/> NOTICE OF INTENT Approximate date work will start: 9/17/2012 <input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: <input type="checkbox"/> SPUD REPORT Date of Spud: <input type="checkbox"/> DRILLING REPORT Report Date:	<div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION </div> <div style="width: 33%;"> <input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER </div> <div style="width: 33%;"> <input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION </div> </div>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. The Operator would like to perform a Top Down Cement job into the Surface Casing in order to bring the Top of Cement above the Surface Casing Shoe. The Surface Casing Shoe is at 2627' and the Top of Cement is currently 2988'. 375 sacks of cement will be used in the Top Down Cement Job. Thank you.		
Approved by the Utah Division of Oil, Gas and Mining Date: September 17, 2012 By: <u>Derek Duff</u>		
NAME (PLEASE PRINT) Cara Mahler		PHONE NUMBER 720 929-6029
SIGNATURE N/A		TITLE Regulatory Analyst I
DATE 9/17/2012		

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: MORGAN STATE 921-36E1CS
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PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 10/1/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE TUBING	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
	<input type="checkbox"/> NEW CONSTRUCTION	
	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
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	<input type="checkbox"/> TEMPORARY ABANDON	
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	<input type="checkbox"/> VENT OR FLARE	
	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. Started completing the well. Well TD at 9,555.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 02, 2012		
NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 10/1/2012	

STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
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2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P.		7. UNIT or CA AGREEMENT NAME:
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th Street, Suite 600, Denver, CO, 80217 3779		8. WELL NAME and NUMBER: MORGAN STATE 921-36E1CS
4. LOCATION OF WELL FOOTAGES AT SURFACE: 1538 FNL 0791 FWL QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SWNW Section: 36 Township: 09.0S Range: 21.0E Meridian: S		9. API NUMBER: 43047522780000
PHONE NUMBER: 720 929-6514		9. FIELD and POOL or WILDCAT: NATURAL BUTTES
COUNTY: UTAH		STATE: UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
TYPE OF SUBMISSION	TYPE OF ACTION	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE	
<input type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion:	<input type="checkbox"/> ALTER CASING	
<input type="checkbox"/> SPUD REPORT Date of Spud:	<input type="checkbox"/> CASING REPAIR	
<input checked="" type="checkbox"/> DRILLING REPORT Report Date: 10/10/2012	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	
	<input type="checkbox"/> CHANGE WELL STATUS	
	<input type="checkbox"/> CHANGE WELL NAME	
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	
	<input type="checkbox"/> CONVERT WELL TYPE	
	<input type="checkbox"/> DEEPEN	
	<input type="checkbox"/> FRACTURE TREAT	
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	<input type="checkbox"/> OPERATOR CHANGE	
	<input type="checkbox"/> PLUG AND ABANDON	
	<input type="checkbox"/> PLUG BACK	
	<input checked="" type="checkbox"/> PRODUCTION START OR RESUME	
	<input type="checkbox"/> RECLAMATION OF WELL SITE	
	<input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION	
	<input type="checkbox"/> REPERFORATE CURRENT FORMATION	
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	<input type="checkbox"/> TEMPORARY ABANDON	
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	<input type="checkbox"/> WATER DISPOSAL	
	<input type="checkbox"/> WATER SHUTOFF	
	<input type="checkbox"/> SI TA STATUS EXTENSION	
	<input type="checkbox"/> WILDCAT WELL DETERMINATION	
	<input type="checkbox"/> OTHER: <input style="width: 100px;" type="text"/>	
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc. The subject well was placed on production on 10/10/2012. The Chronological Well History will be submitted with the well completion Report.		
Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 16, 2012		
NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBER 720 929-6857	TITLE Regulatory Analyst II
SIGNATURE N/A	DATE 10/15/2012	

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

C
FORM 6

ENTITY ACTION FORM

Operator: KERR McGEE OIL & GAS ONSHORE LP Operator Account Number: N 2995
Address: P.O. Box 173779
city DENVER
state CO zip 80217 Phone Number: (720) 929-6857

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752276	Morgan State 921-36D4CS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
E	18529	18529	5/11/2012			10/8/2012	
Comments: This well is completed in the Wasatch and Mesaverde formations. <u>WSMVD BHL: SWNW</u> 11/21/2012							

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752277	Morgan State 921-36E1BS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
E	18530	18530	5/12/2012			10/4/2012	
Comments: This well is completed in the Wasatch and Mesaverde formations. <u>WSMVD BHL: SWNW</u> 11/21/2012							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304752278	Morgan State 921-36E1CS		SWNW	36	9S	21E	UINTAH
Action Code	Current Entity Number	New Entity Number	Spud Date			Entity Assignment Effective Date	
E	18531	18531	5/12/2012			10/10/2012	
Comments: This well is completed in the Wasatch and Mesaverde formations. <u>WSMVD BHL: SWNW</u> 11/21/2012							

ACTION CODES:

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Lindsey Frazier

Name (Please Print)

Signature

REGULATORY ANALYST II

Title

11/20/2012

Date

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STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

AMENDED REPORT ☐ FORM 8
(highlight changes)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. TYPE OF WELL: OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> DRY <input type="checkbox"/> OTHER _____ b. TYPE OF WORK: NEW WELL <input checked="" type="checkbox"/> HORIZ. LATS. <input type="checkbox"/> DEEP-EN <input type="checkbox"/> RE-ENTRY <input type="checkbox"/> DIFF. RESVR. <input type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: ML 22265 6. IF INDIAN, ALLOTTEE OR TRIBE NAME 7. UNIT or CA AGREEMENT NAME UTU63047A 8. WELL NAME and NUMBER: MORGAN STATE 921-36E1CS 9. API NUMBER: 4304752278
2. NAME OF OPERATOR: KERR MCGEE OIL & GAS ONSHORE, L.P. 3. ADDRESS OF OPERATOR: P.O.BOX 173779 CITY DENVER STATE CO ZIP 80217 PHONE NUMBER: (720) 929-6000		10. FIELD AND POOL, OR WILDCAT NATURAL BUTTES 11. QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SWNW 36 9S 21E S
4. LOCATION OF WELL (FOOTAGES) AT SURFACE: SWNW 1538 FNL 791 FWL S36,T9S,R21E AT TOP PRODUCING INTERVAL REPORTED BELOW: SWNW 1941 FNL 809 FWL S36,T9S,R21E AT TOTAL DEPTH: SWNW 1949 FNL 849 FWL S36,T9S,R21E <i>BHL 67 HSM</i>		12. COUNTY UINTAH 13. STATE UTAH

14. DATE SPULDED: 5/12/2012	15. DATE T.D. REACHED: 7/10/2012	16. DATE COMPLETED: 10/10/2012	ABANDONED <input type="checkbox"/> READY TO PRODUCE <input checked="" type="checkbox"/>	17. ELEVATIONS (DF, RKB, RT, GL): 5007 GL
18. TOTAL DEPTH: MD 9,555 TVD 9,529.30		19. PLUG BACK T.D.: MD 9,480 TVD 9,454.55		20. IF MULTIPLE COMPLETIONS, HOW MANY? *
22. TYPE ELECTRIC AND OTHER MECHANICAL LOGS RUN (Submit copy of each) CBL/GR/CCL/TEMP			23. WAS WELL CORED? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit analysis) WAS DST RUN? NO <input checked="" type="checkbox"/> YES <input type="checkbox"/> (Submit report) DIRECTIONAL SURVEY? NO <input type="checkbox"/> YES <input checked="" type="checkbox"/> (Submit copy)	

24. CASING AND LINER RECORD (Report all strings set in well)									
HOLE SIZE	SIZE/GRADE	WEIGHT (#/ft.)	TOP (MD)	BOTTOM (MD)	STAGE CEMENTER DEPTH	CEMENT TYPE & NO. OF SACKS	SLURRY VOLUME (BBL)	CEMENT TOP **	AMOUNT PULLED
20"	14" STL	36.7#	0	40		28			
11"	8 5/8" IJ-55	28#	0	2,627		700		0	
7 7/8"	4 1/2" I-80	11.6#	0	9,526		1,590		2988	

SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
2 3/8"	8,761							

26. PRODUCING INTERVALS					27. PERFORATION RECORD				
FORMATION NAME	TOP (MD)	BOTTOM (MD)	TOP (TVD)	BOTTOM (TVD)	INTERVAL (Top/Bot - MD)	SIZE	NO. HOLES	PERFORATION STATUS	
(A) WASATCH	6,105	7,259			6,105 7,259	0.36	96	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(B) MESAVERDE	7,387	9,238			7,387 9,238	0.36	168	Open <input checked="" type="checkbox"/>	Squeezed <input type="checkbox"/>
(C)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>
(D)								Open <input type="checkbox"/>	Squeezed <input type="checkbox"/>

28. ACID, FRACTURE, TREATMENT, CEMENT SQUEEZE, ETC.	
DEPTH INTERVAL	AMOUNT AND TYPE OF MATERIAL
6105-9238	PUMP 12,556 BBLs SLICK H2O & 285,020 LBS 30/50 OTTAWA SAND
	11 STAGES

29. ENCLOSED ATTACHMENTS: <input type="checkbox"/> ELECTRICAL/MECHANICAL LOGS <input type="checkbox"/> SUNDRY NOTICE FOR PLUGGING AND CEMENT VERIFICATION <input type="checkbox"/> GEOLOGIC REPORT <input type="checkbox"/> CORE ANALYSIS <input type="checkbox"/> DST REPORT <input type="checkbox"/> OTHER: _____	30. WELL STATUS: <div style="text-align: center; font-size: 1.5em; font-weight: bold;">PROD</div>
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31. INITIAL PRODUCTION

INTERVAL A (As shown in Item #26)

DATE FIRST PRODUCED: 10/10/2012		TEST DATE: 10/15/2012		HOURS TESTED: 24		TEST PRODUCTION RATES: →		OIL – BBL: 0		GAS – MCF: 1,920		WATER – BBL: 0		PROD. METHOD: FLOWING							
CHOKE SIZE: 20/64		TGB. PRESS. 1,536		CSG. PRESS. 2,179		API GRAVITY		BTU – GAS		GAS/OIL RATIO		24 HR PRODUCTION RATES: →		OIL – BBL: 0		GAS – MCF: 1,920		WATER – BBL: 0		INTERVAL STATUS: PROD	

INTERVAL B (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL C (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

INTERVAL D (As shown in Item #26)

DATE FIRST PRODUCED:		TEST DATE:		HOURS TESTED:		TEST PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS – MCF:	WATER – BBL:	INTERVAL STATUS:

32. DISPOSITION OF GAS (Sold, Used for Fuel, Vented, Etc.)

SOLD

33. SUMMARY OF POROUS ZONES (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

34. FORMATION (Log) MARKERS:

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER	1,450
				BIRD'S NEST	1,716
				MAHOGANY	2,246
				WASATCH	4,674
				MESAVERDE	7,381

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/4" bit. The remainder of surface hole was drilled with an 11" bit. DQX csg was run from surface to 5003'; LTC csg was run from 5003' to 9526'. As per the Sundry Notice approved 9/17/12 a top down cement job using 377 sx cement was performed to get cement to surface. Attached is the chronological well history, perforation report & final survey.

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records.

NAME (PLEASE PRINT) LINDSEY FRAZIER

TITLE REGULATORY ANALYST

SIGNATURE

DATE

11-2-12

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

** ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/11/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/30/2012	1:30 - 3:30	2.00	MIRU	01	C	P		SKID RIG & RU
	3:30 - 5:30	2.00	PRPSPD	14	A	P		WELD ON CONDUCTOR & RIG UP FLOW LINE
	5:30 - 6:00	0.50	PRPSPD	06	A	P		PU 12.25" BIT & 8" MUD MOTOR & TIH
	6:00 - 8:00	2.00	DRLSUR	02	B	P		DRILL 12.25" SURFACE HOLE F/ 49'- 210'
								ROP= 161' @ 80.5 FPH
								WOB= 14/22K
								RPM= 55/105
								SPP=800/500
								GPM= 595
								TRQ= 2600/1900
								PU/SO/ROT = 49/46/47
								NO LOSSES
								HOLE IN GOOD SHAPE
	8:00 - 8:30	0.50	DRLSUR	06	A	P		TOOH & LAY DOWN 12.25" BIT
	8:30 - 0:00	15.50	DRLSUR	08	A	Z		WORK ON DRUM BRAKES (REPLACE WORN LINKAGE & PINS)
								REPLACE PIN POCKETS & PINS ON BRAKE LINKAGE
	5/31/2012 0:00 - 5:30	5.50	DRLSUR	08	A	Z		PU 11" BIT & DIR TOOLS, SCRIBE & TIH
	5:30 - 6:30	1.00	DRLSUR	06	A	P		WORK ON BRAKES (RE-ADIUST)
	6:30 - 9:00	2.50	DRLSUR	08	A	Z		DRILL 11" SURFACE HOLE F/ 210'- 1224'
	9:00 - 16:30	7.50	DRLSUR	02	D	P		ROP= 1014' @ 135 FPH
								WOB= 24/28K
								RPM= 55/105
								SPP=1100/800
								GPM= 595
								TRQ= 2800/2400
								PU/SO/ROT = 79/61/68
								NO LOSSES
								HOLE IN GOOD SHAPE
	16:30 - 17:00	0.50	DRLSUR	07	A	P		SERVICE RIG & EQUIPMENT
	17:00 - 20:00	3.00	DRLSUR	02	D	P		DRILL 11" SURFACE HOLE F/ 1224'-1570'
								ROP= 346' @ 115 FPH
								WOB= 24/28K
								RPM= 55/105
								SPP=1250/900
								GPM= 595
								TRQ= 2800/2400
								PU/SO/ROT = 90/73/79
								NO LOSSES
								HOLE IN GOOD SHAPE
	20:00 - 20:30	0.50	DRLSUR	08	B	Z		WORK ON #2 PUMP (PONY ROD BACKED OUT)

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/11/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	20:30 - 0:00	3.50	DRLSUR	02	D	P		DRILL 11" SURFACE HOLE F/ 1570'-1914 ROP= 344' @ 98 FPH WOB= 24/28K RPM= 55/105 SPP=1250/900 GPM= 595 TRQ= 2800/2400 PU/SO/ROT = 97/73/82 NO LOSSES HOLE IN GOOD SHAPE
6/1/2012	0:00 - 9:00	9.00	DRLSUR	02	D	P		DRILL 11" SURFACE HOLE F/ 1914'-2635' ROP= 721' @ 80 FPH WOB= 24/28K RPM= 55/105 SPP=1250/900 GPM= 595 TRQ= 2800/2400 PU/SO/ROT = 118/89/100 LOST 20% RETURNS @ 2020' HOLE IN GOOD SHAPE
	9:00 - 9:30	0.50	DRLSUR	05	A	P		CIRC & COND HOLE FOR 8.625" CSG
	9:30 - 13:30	4.00	DRLSUR	06	A	P		LAY DOWN DRILL STRING
	13:30 - 18:00	4.50	CSGSUR	12	C	P		PJSM // RUN 59 JT'S, 8.625", 28#, J-55, LT&C CSG // SHOE SET @ 2609' AND BAFFLE @ 2564' CIRC *.625" CSG @ 2609'
	18:00 - 18:30	0.50	CSGSUR	05	A	P		PJSM WITH PRO PETRO CMT CREW /// PUMP 40 BBL'S WATER AHEAD FOLLOWED BY 20 BBL GEL WATER FLUSH /// LEAD = 250sx CLASS G CMT @ 11.0 WT & 3.82 YIELD /// TAIL = 200sx CLASS G CMT @ 15.8 WT & 1.15 YIELD /// DROP PLUG & DISPLACE W/ 160 BBL'S WATER /// PLUG DN @ 19:18 06/01/2012 /// BUMP PLUG W/ 600 PSI ///
	18:30 - 19:30	1.00	CSGSUR	12	E	P		FINAL LIFT = 300 PSI /// CHECK FLOATS - HELD W/ 1 BBL BACK /// LOST 75% RETURNS 80 BB'S INTO LEAD CMT /// NO CMT TO SURFACE
	19:30 - 20:30	1.00	CSGSUR	14	A	P		CUT OFF CONDUCTOR & HANG SURFACE CSG
	20:30 - 22:00	1.50	CSGSUR	12	E	P		RUN 150' OF 1" DN BACKSIDE & TOP OUT W/ 250 sx CLASS G CMT @ 15.8 WT & 1.15 YIELD + 4% Cad2 /// CMT TO SURFACE /// RELEASE RIG @ 22:00 06/01/2012 TO MORGAN STATE 921-36E4BS
7/7/2012	13:00 - 14:00	1.00	MIRU	01	C	P		SKID RIG 10' TO NBU 1022-F1CS, ALIGN OVER WELL
	14:00 - 16:00	2.00	PRPSPD	14	A	P		NIPPLE UP BOPS, FLOWLINE, MUD LINE, WATER LINE, CHANGE OUT CASING BAILS, FOR DRILLING BAILS
	16:00 - 19:30	3.50	PRPSPD	15	A	P		CTJSA RIG UP A-1 TESTER / PRESSURE TEST CASING 1500 HIGH 250 LOW FOR 30 MIN / PRESSURE TEST H&P EQUIP BLIND RAMS, PIPE RAMS, FLOOR VALVE, KILL LINES & KILL LINE VALVES, BOP WING VALVES, HCR VALVE + CHOKE LINE, INNER AND OUTER CHOKE VALVES & MANIFOLD TO 250 PSI LOW @ 5 MINUTES + 5000 PSI HIGH @ 10 MINUTES / TEST ANNULAR TO 250 PSI LOW @ 5 MINUTES + 2500 PSI HIGH

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/11/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/8/2012	19:30 - 20:00	0.50	PRPSPD	14	B	P		INSTALL WEAR BUSHING & SMITH BEARING ASSEMBLY
	20:00 - 20:30	0.50	PRPSPD	15	A	P		TEST SWACO ORBIT,CKOKE MANIFOLD VALVES TO 1,000 PSI
	20:30 - 22:00	1.50	PRPSPD	06	A	P		M/U BIT,MUD MTR,DIRECTIONAL TOOLS / TEST SAME ,TRIP IN HOLE TAG @ 2,552'
	22:00 - 23:00	1.00	PRPSPD	07	B	P		LEVEL DERRICK,PRES SPUD INSP,INSTALL ROT HEAD
	23:00 - 0:00	1.00	PRPSPD	02	F	P		DRILL FLOAT TRAC F/ 2,552-BAFFLE @ 2,589, SHOE @ 2,628, OPEN HOLE TO 2,652
	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL /SLIDE / SURVEY/ F/ 2,652-3,552 = 900' @ 150 FPH WOB 18,000-22,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 115 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 1,910/1,530 TORQUE ON/OFF BTM 7,000/ 4,000 PICK UP WT 112,000 SLACK OFF WT 95,000 ROT WT 103,000 SLIDE 75' IN 45 MIN 5.5 % OF FOOTAGE DRILLED, 12.5 %OF HRS DRILLED MUD WT 8.4 VIS 26, DROPPING TO VERTICAL -SURVEY @ 3,502 INC .81 AZM 229.48 NOV-D WATER SWACO OFF LINE
	6:00 - 14:00	8.00	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY/ F/ 3,652-4,780 = 1,128' @ 141 FPH WOB 18,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 115 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 1,910/1,580 TORQUE ON/OFF BTM 7,000/ 4,000 PICK UP WT 112,000 SLACK OFF WT 95,000 ROT WT 103,000 SLIDE 40' IN 50 MIN 3.5 % OF FOOTAGE DRILLED, 10.4 %OF HRS DRILLED MAKE UP WATER 120 BBLS MUD WT 8.4 VIS 26, NOV-D WATER SWACO OFF LINE
	14:00 - 14:30	0.50	DRLPRO	02	D	P		DAILY RIG SERVICE

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/11/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL / SLIDE / SURVEY/ F/ 4,780-6,305 = 1,525' @ 152.5 FPH WOB 18,000-26,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 115 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2,165/1,1,860 TORQUE ON/OFF BTM 10,000/ 6,000 PICK UP WT 170,000 SLACK OFF WT 125,000 ROT WT 147,000 SLIDE 100' IN 100' MIN 6.5 % OF FOOTAGE DRILLED, 16.6 %OF HRS DRILLED MAKE UP WATER 150 BBLs MUD WT 8.4 VIS 26, NOV-D WATER SWACO OFF LINE
7/9/2012	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL /SLIDE / SURVEY/ F/ 6,305-6,900 = 595' @ 99 FPH WOB 18,000-26,000 TOP DRIVE RPM 40-78 MUD MOTOR RPM 115 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2,180/1,830 TORQUE ON/OFF BTM 11,000/ 7,000 PICK UP WT 183,000 SLACK OFF WT 138,000 ROT WT 156,000 SLIDE 66' IN 95 MIN 11 % OF FOOTAGE DRILLED, 26 %OF HRS DRILLED MUD WT 8.4 VIS 26 PUMPING 10 BBL SWEEPS EVERY STAND,W/ 10# BBL CALCIUM CARBONATE,, 120 BBLs MAKE UP WATER NOV-D WATER SWACO OFF LINE

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

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Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	6:00 - 14:00	8.00	DRLPRO	02	D	P		DRILL /SLIDE / SURVEY/ F/ 6,900-7,520 = 620' @77.5 FPH WOB 18,000-26,000 TOP DRIVE RPM 40-78 MUD MOTOR RPM 115 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2,180/1,830 TORQUE ON/OFF BTM 11,000/ 7,000 PICK UP WT 183,000 SLACK OFF WT 138,000 ROT WT 156,000 SLIDE43' IN 85 MIN 6.8 % OF FOOTAGE DRILLED,18 %OF HRS DRILLED MUD WT 8.4 VIS 26 PUMPING 10 BBL SWEEPS EVERY STAND,W/ 10# BBL CALCIUM CARBONATE,, 120 BBLs MAKE UP WATER NOV-D WATER SWACO ON LINE@ 7,425 AS PER DENVER ANNULAR PRESSURE 160 ,EQUIVLANT 8.9 PPG MUD WT DAILY RIG SERVICE
	14:00 - 14:30	0.50	DRLPRO	07	A	P		
	14:30 - 0:00	9.50	DRLPRO	02	D	P		DRILL /SLIDE / SURVEY/ F/ 7,520-8,415 = 795' @ 83.6 FPH WOB 18,000-26,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 115 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2,245 /2,010 TORQUE ON/OFF BTM 12,000/ 10,000 PICK UP WT 212,000 SLACK OFF WT 151,000 ROT WT 180,000 SLIDE 35' IN 75 MIN 4.4 % OF FOOTAGE DRILLED,13 %OF HRS DRILLED MUD WT 8.5 VIS 26 PUMPING 10 BBL SWEEPS EVERY STAND,W/ 10# BBL CALCIUM CARBONATE,, 120 BBLs MAKE UP WATER NOV-D WATER SWACO ON LINE@ 7,425 AS PER DENVER ANNULAR PRESSURE 160 ,EQUIVLANT 8.9 PPG MUD WT

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

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UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/10/2012	0:00 - 6:00	6.00	DRLPRO	02	D	P		DRILL / SURVEY/ F/ 8,415-9,035= 620' @ 103 FPH WOB 20,000-27,000 TOP DRIVE RPM 40-76 MUD MOTOR RPM 115 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2,180/1,830 TORQUE ON/OFF BTM 15,000/ 10,000 PICK UP WT 221,000 SLACK OFF WT 159,000 ROT WT 183,000 200 BBLs MAKE UP WATER SURVEY @ 8,885 INC 2.0 AZM 130 10' N - 9'E OF CENTER NOV-D WATER SWACO ON LINE 7,425 , @ 8,500 HOLDING ANNULAR PRESS @ 350-425 EQUIV TO 9.4 WITH ANNULAR PRESSURE @ 450-475 EQUIV MUD WT 9.5 LOSING 70 BBLs HR 5' FLARE
	6:00 - 10:00	4.00	DRLPRO	02	D	P		DRILL / SURVEY/ F/ 9,035-9,269= 234' @ 103 FPH WOB 20,000-27,000 TOP DRIVE RPM 40-76 MUD MOTOR RPM 115 PUMPS 100 SPM= 450 GPM PUMP PRESSURE ON/OFF BTM 2,180/1,830 TORQUE ON/OFF BTM 15,000/ 10,000 PICK UP WT 221,000 SLACK OFF WT 159,000 ROT WT 183,000 75 BBLs MAKE UP WATER NOV-OFF LINE SWACO OFF LINE 9,250 DISPLACE HOLE W 10.7 MUD 10% LCM LOST RETURNS @ 9,269 PUMP SWEEPS LOST 175 BBLs WITH 0 TO 20% RETURNS
	10:00 - 13:00	3.00	DRLPRO	06	F	X		BACK REAM OUT 2 STANDS, TO 9,080 TIGHT 8' OFF BTM 9,261, CIRC AND COND MUD, WITH FULL RETURNS. LOST 125 BBLs BUILD VOL PUMP SWEEPS, WASH BACK TO BTM 9,269' *** LOST CIRCULATION
	13:00 - 19:30	6.50	DRLPRO	02	D	P		DRILL / SURVEY/ F/ 9,269-9,555 TD= 286' @ 44 FPH WOB 20,000-27,000 TOP DRIVE RPM 40-76 MUD MOTOR RPM 80 PUMPS 100 SPM= 383 GPM PUMP PRESSURE ON/OFF BTM 1,850/1,590 TORQUE ON/OFF BTM 8,000/ 6,000 PICK UP WT 221,000 SLACK OFF WT 159,000 ROT WT 183,000 MUD WT 11.1 VIS 36 LCM 15%, PUMPING 20% LCM SWEEPS DRILLING AT REDUCED PUMP RATE TO SLOW MUD LOSSES / SEEPAGE TO HOLE 425 BBLs NOV-OFF LINE SWACO OFF LINE 9,250

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: H&P 298/298, CAPSTAR 310/310

Event: DRILLING

Start Date: 5/16/2012

End Date: 7/11/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
7/11/2012	19:30 - 20:30	1.00	DRLPRO	05	C	P		CCH FOR WIPER TRIP / MUD WT 11.1 VIS 35 LCM 15% / 25 BBL MUD LOSS
	20:30 - 22:30	2.00	DRLPRO	06	E	P		13 STAND WIPER TRIP / BACK REAM OUT 4 STANDS / PULL TO 8,320 TIGHT @9,269 8,885 8,805, TIH WASH 100' TO BTM 3' FILL 10 BBL MUD LOSS
	22:30 - 0:00	1.50	DRLPRO	05	D	P		CCH / FOR CASING MUD WT 11.1 VIS 39 LCM 15% MUD LOSS 8 BBLS / BTMS UP 5' FLARE
	0:00 - 5:00	5.00	DRLPRO	06	D	P		SPOT 90 BBLS 12.0# MUD ON BTM / BACK REAM OUT 4 STANDS / TOH / NO PROBLEM / FLOW CHECK @ CSG SHOE / L/D DIR TOOLS / MUD MOTOR
	5:00 - 6:00	1.00	DRLPRO	14	B	P		PULL SMITH BEARING ASSEMBLY & WEAR BUSHING X/O BAILS RU FRANKS
	6:00 - 15:30	9.50	DRLPRO	12	C	P		CTJSA RIG UP FRANKS CASING EQUIP, RUN 104 JTS I-80 11.6# LTC 4.5 CASING +1 CROSSOVER LTC/ DQX 116 JTS I-80 11.6# DQX 4.5 CASING+ RELATED TOOLS / BREAKING CIRCULATION @ SELECTED INTERVALS / LANDING CASING MANDREL IN BOWL W/98,000, @ 9,525 FOR CIRC & CEMENTING / SHOE @9,525 / FC @ 9,474 / MV MKR @ 7,318 X/O @ 5,002 ,RD SAME
	15:30 - 17:00	1.50	DRLPRO	05	D	P		FILL & CIRC CASING BTMS UP GAS MUD CUT 1/10 -15' FLARE /RD FRANKS / CT-JSA WITH BJ
	17:00 - 20:00	3.00	DRLPRO	12	E	P		INSTALL BJ CMT HEAD , TEST PUMP & LINES TO 5,000 PSI , DROP BOTTOM PLUG PUMP 25 BBLS FW PUMP 470 SKS LEAD CEMENT @ 12.0 PPG, (192 BBLS) (PREM LITE II + .0.25 pps CELLO FLAKE + 10 pps KOL SEAL + .05 lb/sx STATIC FREE + 6% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + 0.2 % R-3 +0.4%bwoc FL-52 100.1% FRESH WATER / (12.48 gal/sx, 2.30 yield) + 1,120 SX TAIL @ 14.3 ppg(263.3 BBLS)+ (CLS G 50/50 POZ + 10% SALT + .005lbs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE +0.5%EC-1+ 58.9% FW / (5.94 gal/sx, 1.32 yield) WASH PUMP & LINES DROP TOP PLUG & DISPLACE W/ 147.2 BBLS H2O + ADDITIVES / PLUG DOWN @19:38 HOURS / FLOATS HELD W/ 1.5 BBLS H2O RETURNED TO INVENTORY/ LOST RETURNS @ 40 BBLS IN DISPLACEMENT / LIFT PRESSURE @ 1,993 PSI BUMP PRESSURE @2,416 / TOP OF TAIL CEMENT CALCULATED @ 4,130' / RIG DOWN BJ
	20:00 - 23:00	3.00	DRLPRO	14	A	P		FLUSH BOP'S / UNABLE TO SET PACK OFF IN MANDREL / RAISE BOP/ PICK UP CASING SET MANUAL SLIPS W/ 110,000 CUT OFF CASING & LAY DOWN RUNNING TOOL
	23:00 - 0:00	1.00	DRLPRO	01	E	P		PREP FOR SKID / RELEASE RIG @ 24:00 HRS 7/11/2012 TO MORGAN STATE 921-36E4BS

1 General

1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

1.2 Well/Wellbore Information

Well	MORGAN STATE 921-36E1CS YELLOW	Wellbore No.	OH
Well Name	MORGAN STATE 921-36E1CS	Wellbore Name	MORGAN STATE 921-36E1CS
Report No.	1	Report Date	9/17/2012
Project	UTAH-UINTAH	Site	MORGAN STATE 921-36E PAD
Rig Name/No.	MILES 2/2	Event	COMPLETION
Start Date	9/17/2012	End Date	10/10/2012
Spud Date	5/30/2012	Active Datum	RKB @5,033.00usft (above Mean Sea Level)
UWI	SW/NW/0/9/S/21/E/36/O/O/26/PM/N/1538/W/O/791/O/O		

1.3 General

Contractor		Job Method		Supervisor	
Perforated Assembly		Conveyed Method			

1.4 Initial Conditions

Fluid Type		Fluid Density		Gross Interval	6,105.0 (usft)-9,238.0 (usft)	Start Date/Time	9/18/2012 12:00AM
Surface Press		Estimate Res Press		No. of Intervals	66	End Date/Time	9/18/2012 12:00AM
TVD Fluid Top		Fluid Head		Total Shots	264	Net Perforation Interval	86.00 (usft)
Hydrostatic Press		Press Difference		Avg Shot Density	3.07 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL					Final Press Date	

1.5 Summary

2 Intervals

2.1 Perforated Interval

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/18/2012 12:00AM	WASATCH/			6,105.0	6,106.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/18/2012 12:00AM	WASATCH/			6,116.0	6,118.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,132.0	6,134.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,142.0	6,143.0	4.00		0.360	EXP/	3.375	90.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,414.0	6,415.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,476.0	6,477.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,494.0	6,495.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,533.0	6,535.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,580.0	6,581.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,650.0	6,651.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,675.0	6,676.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,722.0	6,723.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,749.0	6,750.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,791.0	6,792.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,810.0	6,811.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,830.0	6,831.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,853.0	6,854.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,940.0	6,941.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			6,956.0	6,957.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			7,061.0	7,062.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			7,075.0	7,076.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			7,122.0	7,124.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

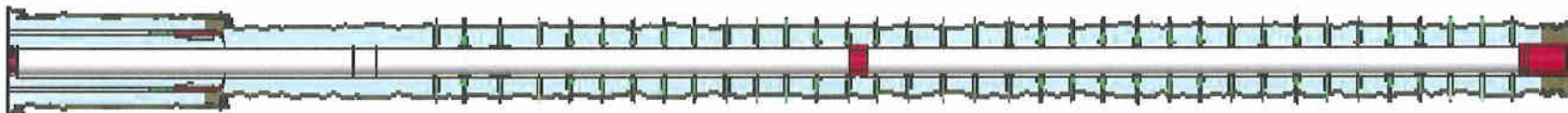
Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/18/2012 12:00AM	WASATCH/			7,138.0	7,139.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			7,175.0	7,176.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			7,197.0	7,198.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	WASATCH/			7,258.0	7,259.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,387.0	7,389.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,441.0	7,442.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,565.0	7,568.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,633.0	7,635.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,711.0	7,713.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,770.0	7,773.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,825.0	7,826.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,869.0	7,871.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,961.0	7,962.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,971.0	7,972.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			7,994.0	7,995.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,037.0	8,038.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,045.0	8,046.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,084.0	8,085.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,124.0	8,125.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,177.0	8,178.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,311.0	8,312.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/18/2012 12:00AM	MESAVERDE/			8,375.0	8,376.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,389.0	8,390.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,423.0	8,424.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,447.0	8,451.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,579.0	8,580.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,619.0	8,620.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,649.0	8,653.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,729.0	8,731.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,769.0	8,771.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,817.0	8,818.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,844.0	8,845.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,865.0	8,866.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,924.0	8,925.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,939.0	8,940.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,955.0	8,956.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			8,997.0	8,998.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,003.0	9,004.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,055.0	9,056.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,064.0	9,065.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,073.0	9,074.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,175.0	9,176.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

2.1 Perforated Interval (Continued)

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diameter (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
9/18/2012 12:00AM	MESAVERDE/			9,205.0	9,206.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
9/18/2012 12:00AM	MESAVERDE/			9,237.0	9,238.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

3 Plots**3.1 Wellbore Schematic**

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 9/17/2012

End Date: 10/10/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
5/30/2012	-							
9/17/2012	7:30 - 8:00	0.50	FRAC	33	D	P		SURFACE CSG @ 2,627TOC 2,988 SURFACE CSG HAD 50 PSI ON WELL, RU HOT OILER FILLED SURFACE, WITH 5 BBLS TMAC, PRESSURED TO 850 PSI WELL STARTED TAKING FLUID PUMPED 10 BBLS @ 1 1/2 TO 2 BPM @ 750 TO 800 PSI, ISIP 800, BLED WELL DOWN SWI HELD SAFETY MEETING: HIGH PRESSURE
9/18/2012	6:30 - 6:45	0.25	SURFPR	48		P		FILL SURFACE CSG. MIRU B&C QUICK TEST. PSI TEST T/ 1000 PSI. HELD FOR 15 MIN LOST 7 PSI. PSI TEST T/ 3500 PSI. HELD FOR 15 MIN LOST 38 PSI. 1ST PSI TEST T/ 7000 PSI. HELD FOR 30 MIN LOST 37 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG
	6:45 - 8:15	1.50	SURFPR	33	C	P		RU SCHLUMBERGER CEMENTING CREW, PRESSURE TEST PUMP & LINES 2000 PSI, GOOD. ESTABLISH INJECTION RATE @ 2.5 BBL PM 700 PSI. PUMPED 10 BBLS FRESH H2O, 10 BBLS SOO1, 10 BBLS, FRESH H2O, 10 BBLS ZONE LOCK, 5 BBLS, FRESH H2O, 377 SKS CLASS G CEMENT, (377) SKS, 12.5 PPG SLURY, (YIELD=1.93) WATER(=10.332 GAL/SK). DISPLACED WITH 2 BBLS FRESH H2O AVERAGE RATE 2.4 BPM, 525 PSI, SWI WITH 650 PSI ON SURFACE TOTAL FLUID PUMPED 168 BBLS
	10:30 - 12:30	2.00	SURFPR	51	B	P		RU WL, RAN CBL FROM 4100' TO SURFACE, CEMENT TOP SURFACE
9/21/2012	7:00 - 11:00	4.00	FRAC	37		P		PERF STG 1)PU 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH PERF AS PER PERF DESIGN. POOH. SWFW

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 9/17/2012

End Date: 10/10/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/26/2012	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 1)WHP 1000 PSI, BRK 3354 PSI @ 4.7 BPM. ISIP 1643 PSI, FG .62. CALC PERFS OPEN @ 50.4 BPM @ 5494 PSI = 71% HOLES OPEN. (17/24 HOLES OPEN) ISIP 2869 PSI, FG .75, NPI 1226 PSI. MP 6054 PSI, MR 51.2 BPM, AP 5610 PSI, AR 50.5 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 2)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8986' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 2)WHP 1210 PSI, BRK 2724 PSI @ 4.7 BPM. ISIP 1863 PSI, FG .65. CALC PERFS OPEN @ 50.5 BPM @ 5133 PSI = 19% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2301 PSI, FG .70, NPI 438 PSI. MP 6091 PSI, MR 51.6 BPM, AP 5006 PSI, AR 50.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 3)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8751' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 3)WHP 475 PSI, BRK 2090 PSI @ 4.9 BPM. ISIP 1480 PSI, FG .61. CALC PERFS OPEN @ 52.9 BPM @ 4460 PSI = 93% HOLES OPEN. (23/24 HOLES OPEN) ISIP 2000 PSI, FG .67, NPI 520 PSI. MP 6260 PSI, MR 55.4 BPM, AP 4918 PSI, AR 54.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 4)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8481' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p>

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 9/17/2012

End Date: 10/10/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/27/2012	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 4)WHP 1345 PSI, BRK 2420 PSI @ 4.7 BPM. ISIP 1830 PSI, FG .66. CALC PERFS OPEN @ 51 BPM @ 4719 PSI = 92% HOLES OPEN. (22/24 HOLES OPEN) ISIP 2633 PSI, FG .75, NPI 803 PSI. MP 6288 PSI, MR 53.3 BPM, AP 4520 PSI, AR 52.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 5)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 8208' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 5)WHP 845 PSI, BRK 2098 PSI @ 5.0 BPM. ISIP 1736 PSI, FG .65. CALC PERFS OPEN @ 54.6 BPM @ 5455 PSI = 79% HOLES OPEN. (19/24 HOLES OPEN) ISIP 2790 PSI, FG .78, NPI 1054 PSI. MP 5997 PSI, MR 55.3 BPM, AP 5336 PSI, AR 54.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 6)PU 4 1/2 8K HAL CBP 7 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7901' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 6)WHP 1232 PSI, BRK 1789 PSI @ 4.7 BPM. ISIP 1343 PSI, FG .61. CALC PERFS OPEN @ 54.7 BPM @ 4459 PSI = 92% HOLES OPEN. (22/24 HOLES OPEN) ISIP 2499 PSI, FG .76, NPI 1156 PSI. MP 5547 PSI, MR 55.3 BPM, AP 4892 PSI, AR 54.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 7)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7665' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 7)WHP 231 PSI, BRK 1823 PSI @ 4.8 BPM. ISIP 1200 PSI, FG .60. CALC PERFS OPEN @ 54.9 BPM @ 4400 PSI = 88% HOLES OPEN. (21/24 HOLES OPEN) ISIP 2276 PSI, FG .74, NPI 1076 PSI. MP 5442 PSI, MR 55.3 BPM, AP 4700 PSI, AR 54.7 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 8)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 7289' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC. HSM, HIGH PSI LINE.</p>
9/28/2012	6:03 - 7:00	0.95	FRAC	48		P		

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 9/17/2012

End Date: 10/10/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
	7:00 - 18:00	11.00	FRAC	36	B	P		<p>FRAC STG 8)WHP 360 PSI, BRK 2249 PSI @ 4.7 BPM. ISIP 1159 PSI, FG .60. CALC PERFS OPEN @ 50.7 BPM @ 3726 PSI = 92% HOLES OPEN. (22/24 HOLES OPEN) ISIP 2327 PSI, FG .76, NPI 1168 PSI. MP 5616 PSI, MR 55.2 BPM, AP 4553 PSI, AR 54.4 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 9)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6987' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 9)WHP 520 PSI, BRK 1992 PSI @ 4.9 BPM. ISIP 1652 PSI, FG .68. CALC PERFS OPEN @ 54.5 BPM @ 4283 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2036 PSI, FG .74, NPI 384 PSI. MP 5068 PSI, MR 55.2 BPM, AP 4402 PSI, AR 54.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 10)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 120 DEG PHASING. RIH SET CBP @ 6710' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 10)WHP 1295 PSI, BRK 1988 PSI @ 4.7 BPM. ISIP 1509 PSI, FG .67. CALC PERFS OPEN @ 50.2 BPM @ 3517 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 2036 PSI, FG .75, NPI 527 PSI. MP 4627 PSI, MR 51. BPM, AP 3647 PSI, AR 50.6 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PERF STG 11)PU 4 1/2 8K HAL CBP & 3 1/8 EXP GUN, 23 GM, .36 HOLE SIZE. 90 DEG PHASING. RIH SET CBP @ 6180' P/U PERF AS PER DESIGN. POOH, XO T/ FRAC.</p> <p>FRAC STG 11)WHP 745 PSI, BRK 1140 PSI @ 4.7 BPM. ISIP 955 PSI, FG .59. CALC PERFS OPEN @ 50.7 BPM @ 3000 PSI = 100% HOLES OPEN. (24/24 HOLES OPEN) ISIP 1481 PSI, FG .68, NPI 526 PSI. MP 4081 PSI, MR 51.4 BPM, AP 3127 PSI, AR 50.8 BPM, PUMPED 30/50 OWATTA SAND. SWI, XO T/ WL.</p> <p>PU 4 1/2 8K HAL CBP. RIH SET KILL PLUG @ 6055'. POOH. DONE FRACING THIS WELL.</p> <p>TOTAL SAND = 285,020 LBS TOTAL CLFL = 12,556 BBL</p>

US ROCKIES REGION
Operation Summary Report

Well: MORGAN STATE 921-36E1CS YELLOW

Spud Date: 5/30/2012

Project: UTAH-UINTAH

Site: MORGAN STATE 921-36E PAD

Rig Name No: MILES 2/2

Event: COMPLETION

Start Date: 9/17/2012

End Date: 10/10/2012

Active Datum: RKB @5,033.00usft (above Mean Sea Level)

UWI: SW/NW/0/9/S/21/E/36/0/0/26/PM/N/1538/W/0/791/0/0

Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation
9/29/2012	-							
10/9/2012	7:00 - 7:30	0.50	DRLOUT	48		P		MILLING PLUGS
	7:30 - 15:00	7.50	DRLOUT	44	C	P		MIRU, NDWH, NU BOP'S, TIH 191 JTS, 6055', TAG KILL PLUG, BREAK CIRC, PRESSURE TEST BOP'S, 3000#, PU PWR SWIVEL, READY TO MILL CBP'S IN AM, SWIFN
10/10/2012	7:00 - 7:30	0.50	DRLOUT	48		P		WELL CONTROL
	7:30 - 17:00	9.50	DRLOUT	44	C	P		TIH 191 JTS, 6055', TAG PLUG# 1, MILL 11 PLUGS, PLUG# 1 6055' 10' SAND 5 MIN 00# KICK PLUG# 2 6180' 20' SAND 5 MIN 100# KICK PLUG# 3 6710' 30' SAND 5 MIN 200# KICK PLUG# 4 6987' 30' SAND 5 MIN 0# KICK PLUG# 5 7289' 30' SAND 5 MIN 200# KICK PLUG# 6 7665' 30' SAND 5 MIN 300# KICK PLUG# 7 7901' 30' SAND 5 MIN 400# KICK PLUG# 8 8208' 30' SAND 5 MIN 300# KICK PLUG# 9 8481' 30' SAND 5 MIN 400# KICK PLUG# 10 8751' 120' SAND 5 MIN 700# KICK PLUG# 11 8986' 30' SAND 5 MIN 600# KICK BTM PERF 9238' PBDT 9480' C/O 15' SAND TO 9480', 298 JTS, LD 23 JTS TO 8760.96', 275 JTS, LAND TBG, ND BOP'S, NUWH, POBS, 2200#, TEST FLOW LINE TO 3000#, TURN TO FB CREW TBG 275 JTS 8731.93' KB 26.00' HANGER .83' XNSN 1.875" 2.20' EOT 8760.96' FRAC WTR 12,556 BBLS RCVD 2,500 BBLS LTR 10,056 BBLS WELL TURNED TO SALES @ 1400 HR ON 10/10/2012, 1700 MCFD, 1920 BWPD, FCP 1780#, FTP 1800#, 20/64" CK.
	17:00 - 17:00	0.00	DRLOUT	50				

Project: UTAH - UTM (feet), NAD27, Zone 12N
 Site: UINAH_MORGAN STATE 921-36E PAD
 Well: MORGAN STATE 921-36E1CS
 Wellbore: MORGAN STATE 921-36E1CS
 Section:
 SHL:
 Design: MORGAN STATE 921-36E1CS (wp01)
 Latitude: 39.985557
 Longitude: -109.505969
 GL: 5007.00
 KB: 26' RKB + 5007' GL @ 5033.00ft (H&P 298)

FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
4623.00	4648.07	WASATCH
5223.00	5248.08	TOP OF CYLINDER
7324.00	7349.12	MESAVERDE
9518.00	9543.16	SEGO

WELL DETAILS: MORGAN STATE 921-36E1CS

+N/-S	+E/-W	Northing	Ground Level: Easting	5007.00 Latitude	Longitude	Slot
0.00	0.00	14527933.51	2058867.92	39.995557	-109.505969	

CASING DETAILS

TVD	MD	Name	Size
2606.32	2627.00	8-5/8	8-5/8



Azimuths to True North
 Magnetic North: 10.95°

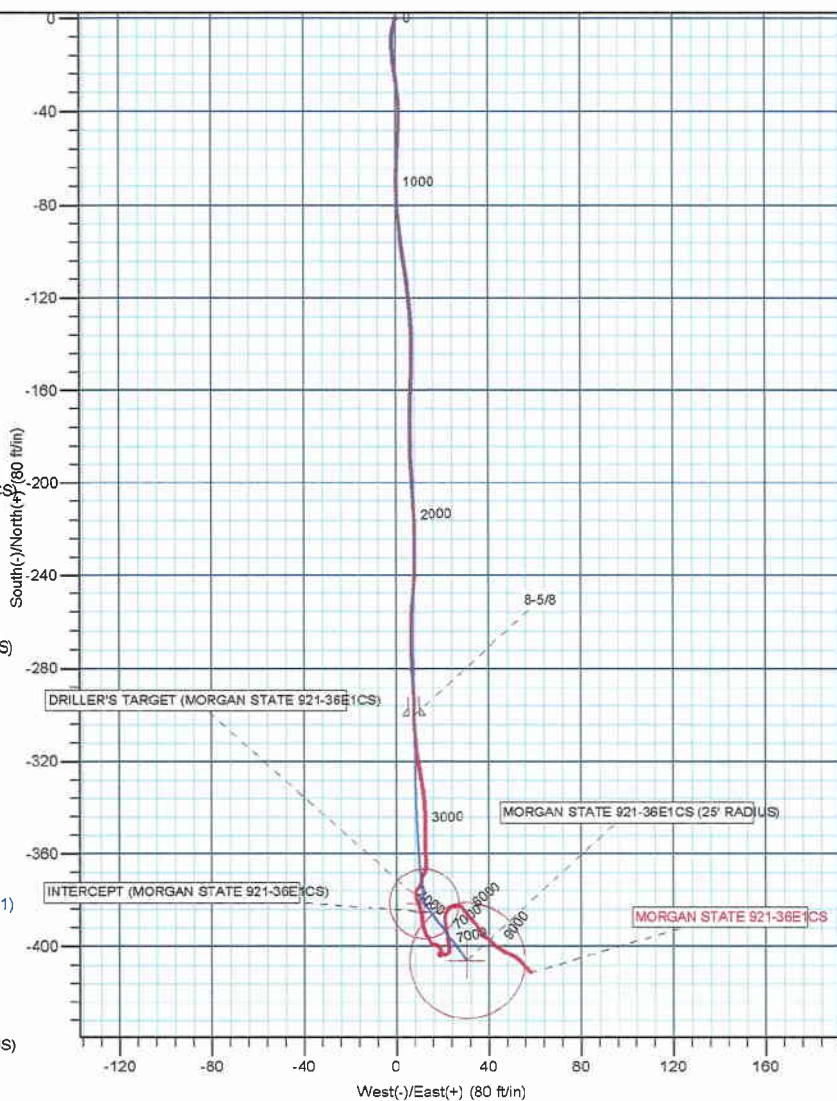
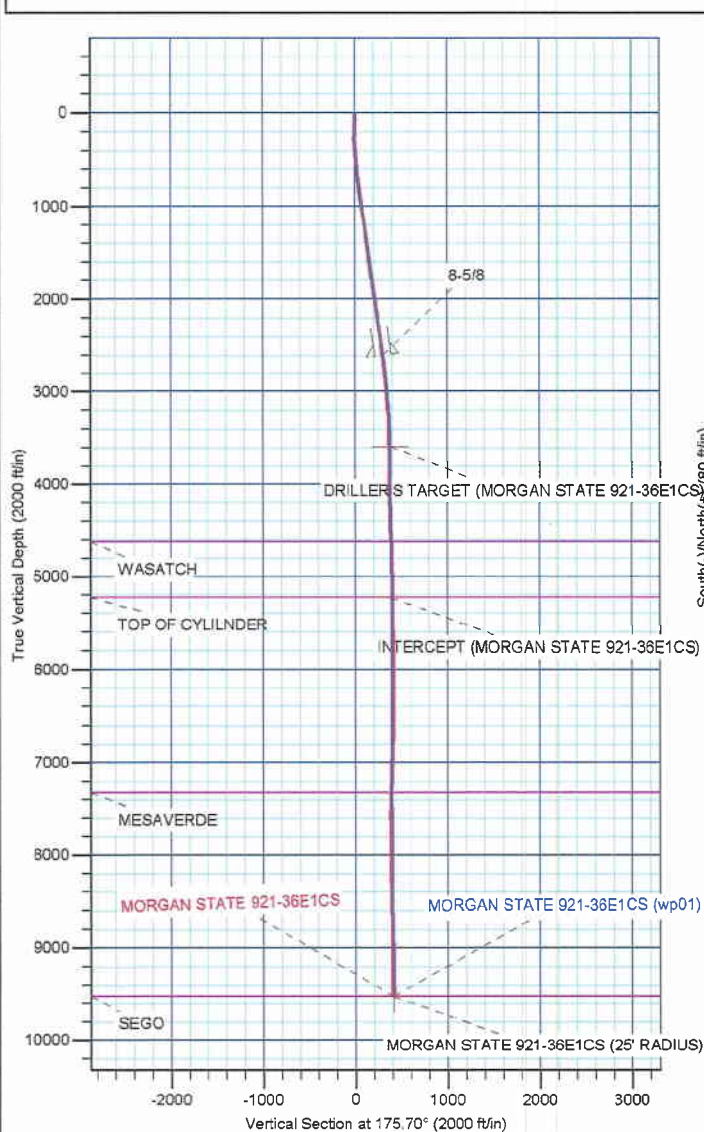
Magnetic Field
 Strength: 52224.6snT
 Dip Angle: 65.84°
 Date: 6/20/2012
 Model: IGRF2010

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
DRILLER'S TARGET (MORGAN STATE 921-36E1CS)	3585.94	-381.47	11.90	14527552.29	2058886.21	39.994510	-109.505927	Circle (Radius: 15.00)
INTERCEPT (MORGAN STATE 921-36E1CS)	5223.00	-385.22	14.74	14527548.59	2058889.11	39.994499	-109.505916	Point
MORGAN STATE 921-36E1CS (25' RADIUS)	9518.00	-406.09	30.53	14527527.98	2058905.26	39.994442	-109.505860	Circle (Radius: 25.00)

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect
2596.00	8.00	178.86	2575.62	-295.95	7.60	0.00	0.00	295.68
2811.00	8.00	178.86	2788.53	-325.86	8.20	0.00	0.00	325.56
3611.00	0.00	170.86	3585.94	-381.47	11.90	1.00	-176.01	381.29
4236.00	0.00	170.86	4210.94	-381.47	11.90	0.00	170.86	381.29
4348.32	0.34	142.88	4323.25	-381.73	12.10	0.30	142.88	381.56
9543.16	0.34	142.88	9518.00	-406.09	30.53	0.00	0.00	407.24



US ROCKIES REGION PLANNING

UTAH - UTM (feet), NAD27, Zone 12N

UINTAH_MORGAN STATE 921-36E PAD

MORGAN STATE 921-36E1CS

MORGAN STATE 921-36E1CS

Design: MORGAN STATE 921-36E1CS

Standard Survey Report

26 July, 2012

Anadarko Petroleum Corp

Survey Report

Company:	US ROCKIES REGION PLANNING	Local Co-ordinate Reference:	Well MORGAN STATE 921-36E1CS
Project:	UTAH - UTM (feet), NAD27, Zone 12N	TVD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Site:	UINTAH_MORGAN STATE 921-36E PAD	MD Reference:	26' RKB + 5007' GL @ 5033.00ft (H&P 298)
Well:	MORGAN STATE 921-36E1CS	North Reference:	True
Wellbore:	MORGAN STATE 921-36E1CS	Survey Calculation Method:	Minimum Curvature
Design:	MORGAN STATE 921-36E1CS	Database:	edmp

Project	UTAH - UTM (feet), NAD27, Zone 12N		
Map System:	Universal Transverse Mercator (US Survey Feet)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	Zone 12N (114 W to 108 W)		

Site	UINTAH_MORGAN STATE 921-36E PAD			
Site Position:		Northing:	14,527,931.66 usft	Latitude: 39.995551
From:	Lat/Long	Easting:	2,058,887.84 usft	Longitude: -109.505898
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence: 0.96 °

Well	MORGAN STATE 921-36E1CS			
Well Position	+N/-S	0.00 ft	Northing:	14,527,933.51 usft
	+E/-W	0.00 ft	Easting:	2,058,867.91 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
			Ground Level:	5,007.00 ft

Wellbore	MORGAN STATE 921-36E1CS				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF2010	6/20/2012	(°)	(°)	(nT)
			10.95	65.84	52,225

Design	MORGAN STATE 921-36E1CS			
Audit Notes:				
Version:	1.0	Phase:	ACTUAL	Tie On Depth: 17.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	17.00	0.00	0.00	171.93

Survey Program	Date	7/26/2012			
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
246.00	2,596.00	Survey #1 (MORGAN STATE 921-36E1CS	MWD	MWD - STANDARD	
2,653.00	9,555.00	Survey #2 (MORGAN STATE 921-36E1CS	MWD	MWD - STANDARD	

Survey										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn	
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate	
(ft)			(ft)			(ft)	(°/100usft)	(°/100usft)	(°/100usft)	
17.00	0.00	0.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00	
246.00	0.18	13.59	246.00	0.35	0.08	-0.33	0.08	0.08	0.00	
337.00	1.41	195.87	336.99	-0.59	-0.19	0.56	1.75	1.35	-195.30	
428.00	3.17	194.91	427.92	-4.10	-1.14	3.90	1.93	1.93	-1.05	
523.00	4.57	180.14	522.70	-10.42	-1.83	10.06	1.80	1.47	-15.55	
618.00	6.42	171.35	617.26	-19.46	-1.04	19.12	2.13	1.95	-9.25	
713.00	7.21	171.35	711.59	-30.60	0.66	30.39	0.83	0.83	0.00	
809.00	7.03	180.75	806.85	-42.43	1.49	42.22	1.23	-0.19	9.79	
903.00	8.35	185.24	900.00	-54.98	0.79	54.55	1.54	1.40	4.78	
997.00	9.06	180.40	992.92	-69.18	0.11	68.51	1.08	0.76	-5.15	

Anadarko Petroleum Corp

Survey Report

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_MORGAN STATE 921-36E1CS
Well: MORGAN STATE 921-36E1CS
Wellbore: MORGAN STATE 921-36E1CS
Design: MORGAN STATE 921-36E1CS

Local Co-ordinate Reference: Well MORGAN STATE 921-36E1CS
TVD Reference: 26' RKB + 5007' GL @ 5033.00ft (H&P 298)
MD Reference: 26' RKB + 5007' GL @ 5033.00ft (H&P 298)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: edmp

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
1,090.00	8.79	174.60	1,084.80	-83.58	0.73	82.85	1.01	-0.29	-6.24	
1,185.00	8.97	171.53	1,178.66	-98.13	2.50	97.51	0.53	0.19	-3.23	
1,280.00	8.09	171.79	1,272.61	-112.07	4.55	111.60	0.93	-0.93	0.27	
1,373.00	7.56	175.75	1,364.74	-124.65	5.94	124.25	0.81	-0.57	4.26	
1,467.00	6.86	177.33	1,458.00	-136.42	6.66	136.01	0.77	-0.74	1.68	
1,564.00	7.56	182.16	1,554.23	-148.59	6.69	148.05	0.95	0.72	4.98	
1,657.00	8.20	182.84	1,646.35	-161.32	6.13	160.59	0.70	0.69	0.73	
1,753.00	8.09	179.35	1,741.39	-174.92	5.86	174.01	0.53	-0.11	-3.64	
1,856.00	8.62	178.12	1,843.29	-189.88	6.20	188.87	0.54	0.51	-1.19	
1,940.00	8.44	176.27	1,926.36	-202.32	6.81	201.27	0.39	-0.21	-2.20	
2,034.00	8.09	176.89	2,019.39	-215.81	7.61	214.74	0.38	-0.37	0.66	
2,126.00	8.00	179.08	2,110.48	-228.67	8.07	227.54	0.35	-0.10	2.38	
2,218.00	8.71	184.45	2,201.51	-242.02	7.63	240.69	1.15	0.77	5.84	
2,309.00	8.62	183.30	2,291.47	-255.70	6.70	254.11	0.21	-0.10	-1.26	
2,404.00	8.00	179.44	2,385.47	-269.42	6.36	267.64	0.88	-0.65	-4.06	
2,495.00	7.91	175.48	2,475.59	-281.99	6.91	280.17	0.61	-0.10	-4.35	
2,596.00	8.00	178.86	2,575.62	-295.95	7.60	294.08	0.47	0.09	3.35	
TIE ON										
2,653.00	7.75	176.75	2,632.09	-303.75	7.90	301.85	0.67	-0.44	-3.70	
FIRST MWD SURVEY										
2,747.00	7.31	173.60	2,725.28	-316.02	8.92	314.14	0.64	-0.47	-3.35	
2,842.00	6.60	169.80	2,819.58	-327.40	10.56	325.64	0.89	-0.75	-4.00	
2,936.00	5.06	173.73	2,913.09	-336.84	11.97	335.18	1.69	-1.64	4.18	
3,031.00	4.44	179.61	3,007.76	-344.68	12.46	343.01	0.83	-0.65	6.19	
3,125.00	4.25	177.98	3,101.49	-351.80	12.60	350.08	0.24	-0.20	-1.73	
3,220.00	3.44	180.85	3,196.28	-358.17	12.69	356.40	0.88	-0.85	3.02	
3,314.00	2.38	174.36	3,290.15	-362.93	12.84	361.13	1.18	-1.13	-6.90	
3,408.00	1.63	185.36	3,384.10	-366.20	12.90	364.38	0.89	-0.80	11.70	
3,502.00	0.81	229.48	3,478.08	-367.96	12.27	366.04	1.27	-0.87	46.94	
3,597.00	0.94	203.73	3,573.07	-369.11	11.45	367.06	0.43	0.14	-27.11	
3,691.00	1.19	189.11	3,667.05	-370.78	10.98	368.65	0.39	0.27	-15.55	
3,786.00	1.31	188.11	3,762.03	-372.83	10.67	370.64	0.13	0.13	-1.05	
3,880.00	0.56	218.48	3,856.01	-374.26	10.24	371.99	0.93	-0.80	32.31	
3,974.00	0.81	235.36	3,950.01	-374.99	9.40	372.60	0.34	0.27	17.96	
4,069.00	1.19	204.23	4,044.99	-376.27	8.45	373.73	0.68	0.40	-32.77	
4,163.00	1.00	167.23	4,138.98	-377.96	8.23	375.38	0.76	-0.20	-39.36	
4,258.00	1.13	156.98	4,233.96	-379.63	8.78	377.11	0.24	0.14	-10.79	
4,352.00	1.19	155.36	4,327.94	-381.37	9.55	378.94	0.07	0.06	-1.72	
4,447.00	1.44	165.23	4,422.92	-383.43	10.26	381.07	0.35	0.26	10.39	
4,541.00	1.56	170.61	4,516.88	-385.83	10.77	383.52	0.20	0.13	5.72	
4,635.00	1.56	174.11	4,610.85	-388.37	11.11	386.08	0.10	0.00	3.72	
4,730.00	1.69	172.23	4,705.81	-391.04	11.43	388.77	0.15	0.14	-1.98	
4,824.00	0.88	153.11	4,799.79	-393.06	11.95	390.84	0.96	-0.86	-20.34	

Anadarko Petroleum Corp

Survey Report

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_MORGAN STATE 921-36E PAD
Well: MORGAN STATE 921-36E1CS
Wellbore: MORGAN STATE 921-36E1CS
Design: MORGAN STATE 921-36E1CS

Local Co-ordinate Reference: Well MORGAN STATE 921-36E1CS
TYD Reference: 26' RKB + 5007' GL @ 5033.00ft (H&P 298)
MD Reference: 26' RKB + 5007' GL @ 5033.00ft (H&P 298)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: edmp

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
4,919.00	1.13	153.98	4,894.77	-394.55	12.69	392.42	0.26	0.26	0.92	
5,013.00	1.31	152.23	4,988.75	-396.33	13.60	394.32	0.20	0.19	-1.86	
5,107.00	1.38	152.73	5,082.73	-398.29	14.62	396.40	0.08	0.07	0.53	
5,202.00	1.00	101.48	5,177.71	-399.47	15.95	397.75	1.14	-0.40	-53.95	
5,296.00	0.38	30.73	5,271.70	-399.37	16.92	397.79	1.01	-0.66	-75.27	
5,391.00	0.31	131.98	5,366.70	-399.27	17.27	397.74	0.56	-0.07	106.58	
5,485.00	0.38	127.98	5,460.70	-399.63	17.70	398.16	0.08	0.07	-4.26	
5,580.00	0.44	130.36	5,555.70	-400.06	18.23	398.66	0.07	0.06	2.51	
5,674.00	0.69	152.11	5,649.69	-400.79	18.77	399.46	0.35	0.27	23.14	
5,769.00	0.69	159.98	5,744.68	-401.84	19.23	400.56	0.10	0.00	8.28	
5,863.00	0.94	164.61	5,838.68	-403.11	19.63	401.88	0.27	0.27	4.93	
5,957.00	0.89	269.11	5,932.67	-403.86	19.27	402.57	1.38	-0.27	111.17	
6,052.00	0.44	273.23	6,027.66	-403.85	18.33	402.43	0.27	-0.26	4.34	
6,147.00	0.56	14.98	6,122.66	-403.38	18.09	401.93	0.82	0.13	107.11	
6,241.00	0.44	44.36	6,216.66	-402.68	18.46	401.29	0.30	-0.13	31.26	
6,336.00	0.38	85.36	6,311.66	-402.40	19.03	401.08	0.31	-0.06	43.16	
6,430.00	0.44	134.61	6,405.65	-402.62	19.60	401.39	0.37	0.06	52.39	
6,524.00	0.69	140.86	6,499.65	-403.32	20.21	402.16	0.27	0.27	6.65	
6,619.00	0.50	54.98	6,594.65	-403.52	20.91	402.46	0.87	-0.20	-90.40	
6,713.00	0.69	79.86	6,688.64	-403.19	21.80	402.25	0.34	0.20	26.47	
6,808.00	0.69	32.36	6,783.64	-402.60	22.67	401.80	0.59	0.00	-50.00	
6,902.00	1.44	358.23	6,877.62	-400.94	22.94	400.19	1.01	0.80	-36.31	
6,997.00	2.63	347.48	6,972.56	-397.62	22.43	396.83	1.31	1.25	-11.32	
7,092.00	2.56	350.23	7,067.46	-393.41	21.60	392.54	0.15	-0.07	2.89	
7,186.00	2.31	352.48	7,161.38	-389.46	20.99	388.55	0.28	-0.27	2.39	
7,280.00	1.25	13.11	7,255.33	-386.58	20.98	385.70	1.30	-1.13	21.95	
7,375.00	0.94	28.23	7,350.31	-384.89	21.58	384.10	0.44	-0.33	15.92	
7,469.00	1.00	52.61	7,444.30	-383.71	22.60	383.08	0.44	0.06	25.94	
7,563.00	1.00	75.11	7,538.29	-383.00	24.04	382.58	0.42	0.00	23.94	
7,658.00	1.13	88.98	7,633.27	-382.77	25.78	382.60	0.30	0.14	14.60	
7,752.00	1.00	92.61	7,727.25	-382.79	27.53	382.86	0.16	-0.14	3.86	
7,846.00	0.19	174.11	7,821.25	-382.98	28.36	383.17	1.05	-0.86	86.70	
7,941.00	0.56	146.48	7,916.25	-383.53	28.63	383.75	0.42	0.39	-29.08	
8,035.00	0.81	139.73	8,010.24	-384.42	29.32	384.73	0.28	0.27	-7.18	
8,130.00	0.81	138.73	8,105.23	-385.43	30.19	385.86	0.01	0.00	-1.05	
8,224.00	0.94	141.73	8,199.22	-386.54	31.11	387.08	0.15	0.14	3.19	
8,318.00	0.88	139.11	8,293.21	-387.69	32.06	388.35	0.08	-0.06	-2.79	
8,413.00	1.06	136.36	8,388.19	-388.88	33.14	389.68	0.20	0.19	-2.89	
8,507.00	1.06	142.98	8,482.18	-390.20	34.27	391.15	0.13	0.00	7.04	
8,602.00	1.06	146.48	8,577.16	-391.63	35.28	392.71	0.07	0.00	3.68	
8,696.00	1.19	144.61	8,671.14	-393.16	36.33	394.36	0.14	0.14	-1.99	
8,791.00	1.38	142.60	8,766.12	-394.87	37.59	396.23	0.21	0.20	-2.12	
8,885.00	2.00	130.73	8,860.08	-396.84	39.52	398.46	0.75	0.66	-12.63	
8,980.00	1.88	132.23	8,955.02	-398.97	41.93	400.90	0.14	-0.13	1.58	

Anadarko Petroleum Corp

Survey Report

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH_MORGAN STATE 921-36E PAD
Well: MORGAN STATE 921-36E1CS
Wellbore: MORGAN STATE 921-36E1CS
Design: MORGAN STATE 921-36E1CS

Local Co-ordinate Reference: Well MORGAN STATE 921-36E1CS
TVD Reference: 26' RKB + 5007' GL @ 5033.00ft (H&P 298)
MD Reference: 26' RKB + 5007' GL @ 5033.00ft (H&P 298)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: edmp

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,074.00	2.00	121.98	9,048.97	-400.87	44.47	403.14	0.39	0.13	-10.90
9,169.00	2.19	116.73	9,143.91	-402.57	47.49	405.25	0.28	0.20	-5.53
9,263.00	2.00	111.36	9,237.84	-403.97	50.63	407.08	0.29	-0.20	-5.71
9,358.00	2.06	131.11	9,332.78	-405.70	53.46	409.18	0.74	0.06	20.79
9,452.00	2.13	140.23	9,426.72	-408.15	55.85	411.95	0.36	0.07	9.70
LAST MWD SURVEY			28 55						
9,555.00	2.13	140.23	9,529.65	-411.09	58.30	415.21	0.00	0.00	0.00
PROJECTION TO TD									

Design Annotations					
Measured Depth (ft)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Local Coordinates	
2,596.00	2,575.62	-295.95	7.60	TIE ON	
2,653.00	2,632.09	-303.75	7.90	FIRST MWD SURVEY	
9,452.00	9,426.72	-408.15	55.85	LAST MWD SURVEY	
9,555.00	9,529.65	-411.09	58.30	PROJECTION TO TD	

Checked By: _____ Approved By: _____ Date: _____